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Boston

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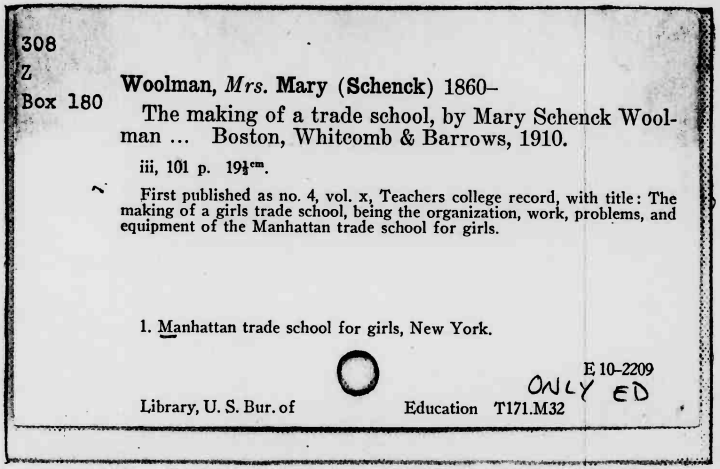

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MARY SCHENCK WOOLMAN

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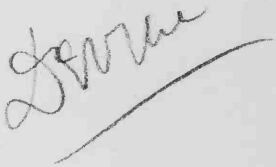

THE MAKING OF A TRADE SCHOOL

By MARY SCHENCK WOOLMAN

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Professor of Domestic Art, Teachers College, Columbia University

WHITCOMB & BARROWS
1910

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THE MAKING OF A TRADE SCHOOL

PART I

ORGANIZATION AND WORK

History

THE Manhattan Trade School for Girls began its work in November, 1902. The building selected for the school was a large private house at 233 West 14th Street, which was equipped like a factory and could comfortably accommodate 100 pupils. Training was offered in a variety of satisfactory trades which required the expert use of the needle, the paste brush, and the foot and electric power sewing machines.

Beginning with twenty pupils on its first day, it was but a few months before the full 100 were on roll and others were applying. In endeavoring to help all who desired instruction the building was soon overcrowded. It thus became evident that, unless increased accommodation was provided, the number already in attendance must be decreased and others, anxious for the training, must be turned away. It was decided that even though the enterprise was young the need was urgent, demanding unusual exertion. It would therefore be wise to make every effort to purchase more commodious quarters. In June, 1906, the school moved to a fine business build-

ing at 209–213 East 23d Street, which could offer daily instruction to about 500 girls.

The movement owes its existence to the earnest study that a group of women and men, interested in philanthropic, sociological, economic, and educational work, gave to the condition of the working girl in New York City. They were all intimately acquainted with the difficulties of the situation. Early in the winter of 1902 this committee made a special investigation of the workrooms of New York. They were but the more convinced that (1) the wages of unskilled labor are declining; (2) while there is a good opportunity for highly skilled labor, the supply is inadequate; (3) the condition of the young, inexpert working girl must be ameliorated by the speedy opening of a trade school for those who have reached the age to obtain working papers; (4) if public instruction could not immediately undertake the organization of such a school, then private initiative must do it, even though it must depend for its support upon voluntary contributions. The result was that an extreme effort was put forth and the following November the first trade school in America, for girls of fourteen years of age, was begun.

The first Board of Administrators, composed largely of members of the original committee of investigators, was as follows:

President, Miss Virginia Potter; Vice-Presidents, Dr. Felix Adler, Mr. John Graham Brooks, Mrs. Theodore Hellman, Mrs. Anna Garlin Spencer, Mrs. Henry Ollesheimer; Treasurer, Mr. J. G. Phelps Stokes; Secretary, Mr. John L. Eliot; Assistant Secretary, Miss

Louise B. Lockwood; Director, Professor Mary Schenck Woolman.

Purpose and Scope

The immediate purpose of the school was to train the youngest and poorest wage-earners to be self-supporting as quickly as possible. It was decided to help the industrial workers rather than the commercial and professional, as the last two are already to some extent provided for in education. The function of the school was, therefore, that of the Short-Time Trade School, which would provide the girl who must go to work the moment she can obtain her working papers (about fourteen years of age) with an enlightened apprenticeship in some productive occupation. Such training cannot be obtained satisfactorily in the market. The immature workers are present there in such large numbers that they complicate the industrial problem by their poverty and inability, and thus tend to lower the wage. Jane Addams, of Hull House, Chicago, says these untrained girls "enter industry at its most painful point, where the trades are already so overcrowded and subdivided that there remains in them very little education for the worker." The school purposed to give its help at this very point.

Trade, on its side, is eager to have skilled women directly fitted for its workrooms, but finds them hard to obtain. The school's duty was to discover the way to meet this wish of the employers of labor. It is true that the utilitarian and industrial education offered by public and private instruction has benefited the home

and society, but such training has not met the problem of adequately fitting for specific employments the young worker who has but a few months to spare. The lack in this instruction has been in specific trade application and flexibility as to method, artistic needs, and mechanical devices. These points are essential to place the girl in immediate touch with her workroom.

Therefore the Manhattan Trade School assumed the responsibility of providing an economic instruction in the practical work of various trades, thus supplying them with capable assistants. Hence its purpose differed not only from the more general instruction of the usual technical institution, but also from those schools which offered specific training in one trade (such as dressmaking), in that it (1) offered help to the youngest wage-earners, (2) gave the choice among many trades, and (3) held the firm conviction that the adequate preparation of successful workers requires more factors of instruction than the training for skill alone. The ideals of the school were the following: (1) to train a girl that she may become self-supporting; (2) to furnish a training which shall enable the worker to shift from one occupation to another allied occupation, *i. e.*, elasticity; (3) to train a girl to understand her relation to her employer, to her fellow-worker, and to her product; (4) to train a girl to value health and to know how to keep and improve it; (5) to train a girl to utilize her former education in such necessary business processes as belong to her workroom; (6) to develop a better woman while making a successful worker; (7) to teach the community at large how best to accomplish such

training, *i. e.*, to serve as a model whose advice and help would facilitate the founding of the best kind of schools for the lowest rank of women workers.

In other words, the Manhattan Trade School aimed to find a way (1) to improve the worker, physically, mentally, morally, and financially; (2) to better the conditions of labor in the workroom; (3) to raise the character of the industries and the conditions of the homes, and (4) to show that such education could be practically undertaken by public instruction. The four aims are really one, for the better workers should improve the product, make higher wages, react advantageously on the industrial situation and on the home, and the course of instruction formulated to accomplish this end would help in the further introduction of such training.

It was not expected that immature girls of fourteen or fifteen years of age would, immediately on entering the market, make large salaries or be broad-minded citizens. The hope was to give them a foundation which would enable them to adapt themselves to situations best fitted to their abilities and to make possible a steady advance toward better occupations, wages, and living. In order to do this, each girl on entering the school must be regarded as having capacity for some special occupation. This aptitude must be discovered that she may be placed where she can attain her highest efficiency as rapidly as possible. She must be treated individually, not as one of a class. Her own efforts must be awakened, her handicaps, such as inadequate health and unadaptable education, must be removed, and her

training proceed in a way to give her possession of her powers.

Conditions among the Workers

The conditions of life among many of the wage-earners of New York City are, briefly stated, as follows: Thousands of families are so poor that the children must go to work the moment the compulsory school years are over. In 1897, 14,900 boys and girls dropped from the fifth school grade, most of them going to work from necessity more or less pressing. To rise to important positions in factories, workrooms, or department stores will require a practical combination of any needed craft with the ability to utilize their school education in rapid deductions, business letters, accounts, and trade transactions. The public school offers such children a general education which will be completed in the eighth grade, but the majority leave before that time. For varying reasons, such as their foreign birth, irregular attendance, the impossibility of much personal attention in the crowded classes of a great city, poor conditions of health, and the desire of the pupils to escape the routine of school as soon as the law will allow, the greater number of them, who go early into trade, have not had a satisfactory education for helping them in their working life. Year after year are they found wanting, and yet young workers still come from the schools at fourteen with poor health, little available hand skill, unprepared to write business letters or to express themselves clearly either by tongue or pen, uninterested in the daily news except in personal or tragic events, unaware of municipal

conditions affecting them, ignorant of the simple terms of business life, and with their arithmetic unavailable for use, even in the simple fundamental processes when complicated with details of trade. The mechanical processes, therefore, which they do know are now useless unless they can first think out the problem.

These boys and girls have no regret at leaving the schools, and are, as a rule, glad to get to work. The tragedy of life, however, begins when they become wage-earners, for they are only fitted for unskilled and poorly paid positions. A little fourteen-year-old girl finds it difficult to obtain a satisfactory occupation in the teeming workrooms of New York. She, or some member of her family, eagerly searches the advertising sheet of one of the daily papers. Most of the "Wants" are entirely beyond her crude powers to supply. An unskilled worker is perhaps desired in some business house, but the applicant finds that hundreds of other girls are flocking to obtain the same position, and her chance is too remote for hope. Or perhaps, after weary days of wandering about from place to place, she is recommended to the boss of some shop, and finds herself in the midst of machines which rush forward at 4,000 or more stitches a minute. She assists a busy worker on men's shirts, her duty being to pin parts together, to finish off, or to run errands. From early morning to late afternoon, with an interval for lunch, she must be ready to lend a hand. She can get at best but $2.50 or $3.00 per week. No rise is possible in this shop unless she can work well on a machine. Her fellow-workers are too busy to teach her, for each moment's pause means reduction

in their little wage. Perhaps she does persist and finally can control a machine. By learning to do one thing rapidly she can obtain a better wage, but two or even more years in trade often pass before she can earn five dollars a week. After several seasons spent in doing the same process thousands of times, her desire for new work becomes deadened, and she is afraid to attempt anything different from her one set task. She usually refuses to try more advanced work, even if offered a good salary while she is learning, for she has lost her ability to push ahead.

In general, it may be said that the untrained girl has to take the best place she can find, without reference to her ability, her physical condition, or her inclination. The most desirable trades are seldom open to her, for they require workers of experience, or, at least, those who have had recognized instruction. Even if a green girl enters a skilled trade, she cannot rise easily in it, and is apt to be dropped out at the first slack season. The sort of positions open to her have usually little future, as they are isolated occupations that do not lead to more advanced work. Illustrations of these employments are wrapping braid, sorting silk, running errands, tying fringe, taking out and putting in buttons in a laundry, dipping candy, assorting lamps, making cigarettes, tending a machine, and tying up packages. These young, unskilled girls wander from one of these occupations to another; their salaries, never running high, rise and fall according to the need felt for the worker, and not because her increasing ability is a factor in her trade life. After several years spent in the market, she is little better off than at her entrance.

Some Difficulties of Organization

It was to relieve this serious situation that the Manhattan Trade School was founded. It began its work in the face of great discouragements. Employers were prejudiced against such instruction, for girls trained in former technical schools had not given satisfaction in the workrooms. The parents of the pupils felt that they could not sacrifice themselves further than the end of the compulsory school years, but must then send their children into wage-earning positions. It was impossible to obtain state or municipal aid, and it was known that the experiment must be costly, for: (1) A trade school must be open all the year for day classes, and for night work when needed (schools usually are open from eight to ten months). (2) The work must be done on correct materials, which are often expensive and perishable; but pupils are too poor to provide them, therefore the school must plan to do so. (3) The supervisors must be well educated, with a broad-minded view of industry, capable of original thought, and having a practical knowledge of trade requirement (women of such caliber can always command the best salaries). The teachers and forewomen also must combine teaching ability with competence in their workrooms; but as the market wishes a similar class of service and gives excellent wages to obtain it, the school must offer a like or even a larger amount. (4) Teachers of highly skilled industries are expert, usually, in but the one occupation, such as straw hat making by electric machine or jewelry box making; consequently, even if the student body is small, the

teaching force can seldom be reduced without cutting off an entire department or a trade. A trade school differs from the high school in this particular, for in the latter, when necessary, two or more academic subjects can be taught by the same instructor.

Another difficulty confronting the school at the beginning was, that while numerous occupations in New York are open to women, there was reason to think that some of these were not well adapted to them. Little was known at that time of the trades offering opportunities for good wages, steady rise to better positions, satisfactory sanitary conditions, and moderate hours of labor; of the physical effect of many of the popular occupations; of the specific requirements of each kind of employment; of the effect of the working girls in their workrooms and in their homes; of their health and how to improve it; of the needs and wishes of the employers; of the relation of the Trade Union to trade instruction, and of labor legislation already operative or which should be furthered. Before deciding on courses of instruction in the Manhattan Trade School some accurate knowledge of these facts had to be obtained.

Selection of Trades

The selection of definite trades was made after five months of investigation in the factories, workrooms, and department stores of New York City. In general, it can be said of the occupations chosen that they employ large numbers of women; require expert workers; training for them is difficult to obtain; there is chance within them for rise to better positions; the wages are good,

and favorable conditions, both physical and moral, prevail in the workrooms. Some trades employing women were rejected, as they failed to meet necessary requirements, while others were not chosen, as there was little chance in them to rise on account of men's trades intervening. Slack seasons occurring in many otherwise good employments were considered, and plans were made whereby the worker could be enabled to shift to another allied trade when her own was slack. If a girl gains complete control of her tool she can adapt herself to other occupations in which it is used with less difficulty than she can change to a trade requiring another tool. Women's industries, to a great extent, center around the skilled use of a few tools. These tools were selected as centers of the school activities, and the connected trades were radiated from them. The most skilled occupations were found to require the use of the sewing machine, foot and electric power, the paint brush, the paste brush, and the needle. Statistics show that teaching the use of this last tool will affect over one-half of the women wage-earners of New York, of whom there are at least 370,000. In addition to the general scheme of fitting a worker so that she may take up another allied occupation in slack seasons, specific training for this purpose is given to those students who choose trades where the busy season is short and of frequent recurrence.

Trade Courses

The curriculum includes instruction in the following trades; the courses are short and the teaching is in trade lines:

I. Use of electric power sewing machines.

1. General Operating—(cheaper variety of work—seasonal; fair wages. Better grade of work—year round, fair and good wages, piece or week work): Shirtwaists, children's dresses (cloth and cotton), boys' waists, infants' wear, children's clothing, women's underwear, fancy petticoats, kimonos and dressing sacques.
2. Special Machines—(seasonal to year round work, depending on kind and demand, wages good): Lace stitch, hemstitching, buttonhole, embroidery (hand and Bonnaz), and scalloping.
3. Dressmaking Operating—(year round, wages good): Lingerie, fancy waists and suits.
4. Straw Sewing—(excellent wages for a short season, but the worker can then return to good wages in general operating): Women's and men's hats.

II. Use of the needle and foot power sewing machines.

1. Dress and Garment Making—(seasons nine to eleven months, and fair to good wages): Uniforms and aprons, white work and simple white embroidery, gymnasium and swimming suits (wholesale and custom), lingerie, dress embroidery, dressmaking (plain and fancy).
2. Millinery—(short seasonal work, low wages, difficult for the average young worker to rise): Trimmings and frame making.
3. Lampshade and Candleshade Making—(seasonal work, fair pay). This trade supplements the Millinery.

III. Use of paste and glue: 1. Sample mounting (virtually year work, fair wages). 2. Sample book covers, labeling, tissue paper novelties and decorations (seasonal and year round work, good wages). 3. Novelty work (year round work, changed within workroom to meet demand, wages good). 4. Jewelry and silverware case making (year round work, wages good).

IV. Use of brush and pencil (year round work, good wages): Special elementary art trades, perforating and stamping, costume sketching, photograph and slide retouching.

Note. Year round work, in general, includes a holiday of longer or shorter duration, usually without pay.

Entrance Plans

The school is open throughout the year in order to train girls whenever they come—the summer months being slack in most trades are especially desirable for instruction. The tuition is free, and in cases of extreme necessity a committee gives Students' Aid, in proportion to the need. Entrance to day classes for girls who are from fourteen to seventeen years of age and who can show their working papers or be able to produce documentary evidence of age, if under sixteen, can occur any week.

Each girl who enters, after selecting her trade, is given a typewritten paper showing the possible steps of advance in her chosen course. She takes this home in order that the family may know what is before her. She can by special effort or by outside study lessen the length of her training. The first month in the school is a test time. If the girl shows the needed qualities she is allowed to continue.

During the month of trial her instructors decide what she needs and if her chosen trade is the best for her. The right is reserved to make a complete change if her health will not stand the one she desires, if she has no ability for it, or if she gives evidence of special talent in another direction.

Industrial Intelligence

Every student has, as a part of her trade education, such academic work, art, and physical training as seems necessary; when she passes certain standards she is then allowed to devote full time to her selected occupation. It is not possible for a worker who has skill with the hand and no education to back it up to rise far in her trade. There is many a tragedy in the market of the woman whose poor early education prevented her from getting ahead. Accurate expression, whether oral or written, the use of arithmetic in simple trade transactions or detailed accounts, the ability to grasp the important factors in any situation and then to go to work without waste of time or motion, are required for positions of trust and for supervision in any workroom. It was soon discovered that the girls entering the school know arithmetic in an abstract way, but are at sea when asked to meet the ordinary trade problems. They are inaccurate in reading and copying; they cannot write a letter of application, conduct correspondence, make out checks, or keep simple accounts. They are ignorant of the laws already made which concern them and of their own relation to future laws. They have no ideals in their trade life. They need to see the relation of their chosen

trade to the country, of their work to their employer's success, the effect they may have in bringing about a better feeling between the employer and the wage-earner. A practical, immediately available business education is absolutely essential to make workwomen of executive ability. Therefore specific trade instruction in arithmetic, English, history, geography, and civics was planned to supplement and enrich the trade courses.

Steady progress has been made in determining the kind of cultural trade instruction which will best assist such young wage-earners. A new field in practical education had to be opened, and subject matter which could be of service in the workrooms selected from it. The many trades of the school had to be studied in order to know their needs. The work has grown more valuable each year and has proved itself to be a truly necessary part of the curriculum. A concrete evidence of its worth is the fact that many of the girls in slack seasons have taken clerical positions and have been complimented on their grasp of the subject, their orderliness, their ability to think, and their reliability. Naturally all departments unite to develop character in the students, but the Academic Department feels this to be a special aim. Pleasure in the subject of instruction, followed by mental and moral improvement, has indicated clearly that the academic dullness which is shown at entrance comes frequently from lack of motive in former studies. The interest is all the more encouraging as there are many handicaps in the teaching, for the students enter at any time, are graded by the trades they select, and are placed in the market as quickly as possible; hence the work

cannot be uniform in its advance. Nor is the academic work a help to the girls in their business life only, for such subjects as the keeping of accounts, the consideration of the cost of living, and the value and price of materials are of direct use also in home life.

Trade Art Instruction

Courses in Trade Art were also organized as a fundamental part of the instruction. Each trade has its own art, and the school has tried to adapt the work in the studios to each different occupation. It recognizes that the art applied in dressmaking differs from that in millinery, and this again from that required for decorating jewelry boxes and calendars. It consequently offers each student the kind of elementary art training needed in her trade. The time is too short to develop designers, but it does help a girl to be more exact, resourceful, and useful in her workroom, and often enables her to make a higher wage. A worker who can place trimming, adapt designs to new purposes, stamp patterns, draw copies of garments, and combine color attractively is especially desirable in her chosen employment.

Health

The young wage-earner of New York is much handicapped by her poor physical condition; heredity, poor habits of life, and unsanitary homes show their effects upon her. The girls who come to the school are young enough to remedy many of their defects. In a few months they will be in positions demanding eight or

more hours a day, in which they must strain every nerve and bend all of their energies to meet the standard brought about by trade competition. The Physical Department of the school studies the health of each girl and trains her to care adequately for it. The specific treatment needed by some of the students takes them many hours a week from their department work. While this has its disadvantages, it is felt to be more important to improve the physical condition than to develop skill alone when the health is too poor to stand the strain of exacting positions. It is often difficult at first to persuade parents that such close attention to health is necessary. The results, however, in the majority of cases have proved the wisdom of this procedure.

Immediately after entering the school and being assigned to a department each girl must report to the school physician. Beginning with the family history, a complete record of all the important events relating to her physical life is taken. She is closely questioned as to all bodily functions, and a careful record is kept of irregularities. Eyes, ears, teeth, nose, throat, and feet are likewise examined, and measurements are taken of height, weight, and the principal expansions. After the examination, instruction as to treatment is given, if any is needed.

The work in the gymnasium has three purposes: invigorative, reactive, and corrective. Every girl who is not restricted on account of physical defects takes the prescribed gymnastic work. Nor has this a physical effect only, for through the active games such qualities as judgment and accuracy, self-control, and the harmo-

nious working with others are developed. Slow, uncertain, vague movements denote lack of mental quickness and strength. Motor activity, rightly directed, leads to poise of mind as well as of body. These girls live mostly in crowded localities of the city, where free exercise is unknown. The school aims, as far as possible, to supply the lack of wholesome outdoor life and give joyous active exercise. Talks on hygiene are a regular part of the work and aim: (1) to give each girl a knowledge of her body and of its functions which will enable her to care for her health in an intelligent manner; (2) to show her the relation of food and its preparation to her physical condition; (3) to establish in her mind ideals of correct living which can be made practical in her surroundings; and (4), recognizing the right and desire of every girl for amusement, to create a love for wholesome and simple pleasures that will take the place of the too strenuous and often unwise recreations which tend to undermine the health of the girl who works.

The Lunchroom and the Cooking Classes

From the opening of the school, hot soup, hot chocolate, or cold milk had been served daily, at two cents a cup, to those wishing to supplement the cold lunch which they had brought from their homes. The teachers also had an opportunity of buying a simple, hot meal which was prepared by one of their number, assisted by students who aided in the preparation, serving, and clearing away. At first the average girl felt she could

not give much time to her trade training, consequently such time had to be devoted to making her able to command a living wage. The hope, however, that in the future the opportunity would come for offering increased domestic training was never forgotten. The opening at the school of a temporary workroom for unemployed women during the financial stress of 1908 provided them with regular work and pay. It was advisable also to serve nourishing lunches daily to these underfed workers. There was already a simple lunchroom in the basement of the school, containing such bare necessities as plain tables on horses, long wooden benches, a gas stove with four burners, a few cooking utensils, and a closet filled with inexpensive china. The complete cost of equipment had been $300.

The school was now, however, face to face with the need to feed daily more than 500 people—teachers, workers, and students—and yet no additional money could be spent for equipment. The necessity was so great, however, that in addition to the usual lunches a hot, nourishing meal was given daily to the hundred workers in the temporary workroom, for which they paid one-half of the price of materials.

With this inauguration of regular cooking it seemed especially desirable to take the opportunity of training at least some of the students in the selection, care, and preparation of food. The majority of these girls will be the mothers of the next generation, and yet they know nothing of food values or food preparation. This is evident from the daily lunches they bring and from their discussions in the class on hygiene. On the other

hand, girls who can remain but a few months in the school have a serious need to face, that of self-support, for the wage for unskilled girls ($3.00) is not sufficient to live on with decency. The physical, mental, and moral future of these young girls demands that they should be able to make more than this pittance. In the few months during which the majority are in attendance both a trade training and a knowledge of cooking cannot be given, therefore the former must take the precedence. The school has been able to prove, however, that girls educated there can command a fair wage in trade, but that a longer time given to this training will enable them to obtain better positions and salaries. Hence an increasing number have been willing to remain longer, giving even a year or more to preparation. It was with this latter class that the time was ripe to offer some training in lunchroom cookery which could teach them what could be procured at low prices and yet be nourishing; how to prepare food at home, and how to use the hot table often found in an up-to-date factory. For this purpose, therefore, some simple additional equipment was installed and a daily menu was offered, comprising inexpensive, attractive, wholesome dishes, at the lowest possible cost. Many of the students care for so little variety in food that all of the necessary elements for building strong, healthy bodies are not supplied, hence they are under-nourished. They require encouragement to even try the food which is essential for improving their physical condition. The girls have taken great interest in their lunchroom cookery. They appreciate the inexpensive menus and admire the simple table decorations. Gradually they have given up spending their few pennies for poor fruit, cake, or candy at some cheap shop, and now purchase nourishing dishes cooked by the students at the school.

The cooking course connects directly with the talks on hygiene. The plan of work is the following: (1) Twenty girls are chosen at one time. These work in two groups of ten each, and for six weeks have daily one-hour lessons. This gives them thirty lessons, which is almost equivalent to what the public school offers in a year, but, being concentrated into daily work and practical use in the lunchroom, is of equal, if not greater, efficacy. (2) The students set the tables, cook a definite part of the lunch, dish the articles, prepare the counters, sell the various dishes, keep and report sales, and clear the counters afterward. The groups alternate in order that preparing food, watching its progress, and taking it from the stove may be done by all with a minimum loss of time from their trade instruction. (3) The selection of girls to take the course is made from (*a*) those who can remain long enough in the school to combine trade training with the simple cooking course, (*b*) those who have such poor health that a knowledge of what to eat and how to cook it is the first consideration, and (*c*) those who are already little housekeepers in their homes, as their mothers are incapacitated or dead.

After several months of experience it was felt that the six weeks of constant practice was well worth while. More elaborate courses of cookery would demand a more thorough kitchen equipment, entailing much expense, and would require students to remain a longer

time in school. With the present arrangement they learn the most important cooking processes in a very practical way, and discuss the relation of food to themselves and to their families.

Trade Orders

The handwork in the various departments falls into three grades: 1. Practice work, which not being up to the standard is ripped up and used again. 2. Seconds; fair work, not quite up to the school standard for trade work. This is sold at cost to the students or to needy institutions. 3. Trade work; up to the standard. This is sold to the trade or to private customers at regular market prices. This feature of the school work, entailing, as it does, the taking of many varieties of orders from the outside factories and workrooms, has proved itself to be an important educational factor. After six years of experience in utilizing orders from the outside workrooms, it can be said that this part of the instruction serves the following purposes: (1) It provides the students with adequate experience on classes of material used in the best workrooms; these girls could not purchase such materials and the school could not afford to buy them for practice. (2) The ordinary conditions in both the wholesale and the custom trade are thus made a fundamental part of the instruction. Reality of this kind helps the supervisors to judge the product from its trade value (amateur work will thus be rejected), and the teaching from the kind of workers turned out. Through the business relation the students

quickly feel the necessity of good finish, rapid work, and responsibility to deliver on time. (3) The orders bring in a money return and thus aid the school in the expense for material. (4) The businesslike appearance of the shops at work on the orders and the experience trade has had with the product have increased the confidence of employers of labor in the ability of the school to train practical workers for the trades. The school is constantly urged by trade to increase its order work, but its unfaltering policy is to take only the amount needed for educational purposes. (5) The business organization and management required in the adequate conduct of a large order department can itself be utilized for educational purposes, and has its value for training students who show promise of becoming good stock clerks.

Trade workers are employed in the business shops connected with the various departments. These assistants have proved their value in making the best utilization of the order work. They facilitate the completion of the work on time and help train the girls to feel responsible for their share of it. As the students work slowly at first, and as their hours in the shops are interrupted by other studies, the trade workers, when necessary, continue with or complete the articles while the girls are absent. They make possible the tradelike organization of the shops, for each one has around her her own little groups of assistants, and she teaches them while she also works. Constant repetition of the same process ceases, after a time, to be valuable to a student, hence her time must not be wasted by too simple work

or by unnecessary details. It often happens also that an article may require expert work in its completion which the students cannot yet do; the trade workers select for each girl the process which will be of value to her, and then do the work the students cannot do or should not do.

The following lists will show the class of orders which have been demanded by trade and turned out by the school:

Operating Department Orders: 1. Trade Work: Ribbon run on webbing for suspenders, infants' dresses—eight different styles, children's aprons—two different styles, hemstitching and embroidery for yokes, ruffling—hem and hemstitched, faggotting.

2. Individual Custom Orders: Dressing sacques, aprons (kitchen, gingham, and work), gymnasium suits, waists, children's dresses, corset covers, drawers, skirts and chemise, sheets, pillowslips, curtains, straw hats, fancy petticoats, kimonos, handkerchiefs, fancy neckwear, infants' outfits, boys' waists, quilting, hemstitching by yard, silk waists and dresses hemstitched, tucking by yard, waists, collars, cuffs, and cloth embroidered, initials on linen and monograms on saddle cloths, ruffling by yard.

3. Order Work for Other Departments: Dressmaking: Machine work on nightgowns, corset covers, drawers, combination suits, petticoats, kimonos, gymnasium bloomers, swimming suits, buttonholes, hemstitching on silk skirts, dresses, waists; Bonnaz embroidery on dresses, waists. Millinery: Veils hemstitched. Art: Pencil and brush cases. Office: Coats and overalls for janitors employed in school.

Dressmaking Department Orders: Aprons, petticoats, maids' dresses; machine-made underwear; collars and neckwear; nurses' uniforms; swimming, bathing, and gymnasium suits; children's and baby clothes; fine handmade underwear; plain shirtwaists, fine waists, afternoon gowns, street suits, evening gowns, cloth suits tailored.

Pasting and Novelty Orders: Mounting suspender webbing, mounting corset samples, pasting suspender tabs and sockets, case making. Desk sets, lampshades, and candleshades.

Art Department Orders: 1. Trade Order Work: Stamping, perforating, coloring fashion plates, stencil cutting.

2. Custom Work: Stenciling curtains, scarfs, table covers, sofa pillows; designing patterns for embroidery for table covers, doilies, bags, buttons, shirtwaists, skirts, parasols, and chiffon scarfs.

3. Order Work for Other Departments: Decorating book covers, desk sets, boxes, dress trimmings—panels, lapels, vests; collars and cuffs, insertions for hand and machine; banding for hats, letters, monograms: designs for doilies, scarfs, curtains, workbags.

PLACEMENT BUREAU

From the first the school made some provision for placing its pupils satisfactorily in the trades for which they are trained. Originally the heads of departments attended to it, each for her own students, but as the school grew and the department work increased this method ceased to be practical. An arrangement was made, therefore, with the Alliance Employment Bureau to place the girls of the Manhattan Trade School when they were ready to leave the school or whenever they applied for help thereafter. This was a most helpful connection

when the work was beginning, but it was understood that when the school reached the point in its development where the volume of business was great enough, and other conditions warranted it, a Placement Bureau should be opened in the school itself. This long-cherished idea went into operation in October, 1908, when a Placement Secretary was engaged and the school bureau was opened. This plan has already proved advantageous. In the first place a bureau so situated can, by keeping in constant touch with the departments, obtain intimate and detailed information about the character, the work, the special aptitudes, and the physique of each girl. Such data are extremely valuable in making wise placements, but are difficult of access for an outside agency. In the second place such a school bureau, open to graduates, tends to bring them occasionally to it, and thus strengthens their interest in and loyalty to the school by giving a practical reality to their connection with it.

Aims

The aims and working plans of the Placement Bureau are the following: (1) To secure suitable positions for girls leaving the school—those forced out by poverty as well as those who have really completed their courses. The problem is to get the square peg into the square hole, and it is solved by having a very intimate knowledge of each peg, and by knowing of as large a variety of holes as possible from which to choose. (2) To be a means of connection and communication between the school and the trades, on the one hand, and the school and its former pupils on the other. (3) To gather data

about trade conditions that shall be helpful to the several departments, or in deciding school policies. (4) To build up a series of records that shall be of general sociological value as well as of immediate use for school purposes.

Kinds and Methods of Work

In connection with the placement itself there are four lines of activity:

1. *Interviews* in the office, when girls come in to apply for positions, and when employers ask for workers. Much valuable data as to the experiences of the girls who have been some time in the trade have been gathered in this way. In the case of the employer, if he is not already familiar with the school, an effort is made to induce him (or her) to go through it.

2. *Trade Visits* of investigation. It is the policy of the Bureau not to place a girl in any establishment until it has been visited, unless it is one already well known to the school, in which case the visit may follow instead of preceding the placement. These visits are often made upon the request of employers or in response to advertisements, if, as sometimes happens, a girl wishes to be placed and the employers already known do not need additional help.

3. *"Following up."* After the girls are placed it is necessary to keep track of them. In order to do this satisfactorily, blanks have been printed in two different forms, one for the employer and the other for the worker. The former asks about the quality of the girl's work (whether it is satisfactory, and if not, why not)

and about her wages. The latter asks the girl to report on her work, wages, and shop conditions. By this system the Placement Secretary is able to keep in close touch with the students who have been placed, and to hear and act upon complaints from either employer or girl with a promptness that often has the result of establishing the worker in a "good" place or, occasionally, rescuing her from a poor one. Employers are almost uniformly prompt and courteous in returning the reports, and all but a very small percentage of the students are equally responsive. In cases where a girl is not heard from, the Students' Aid Secretary makes a personal visit to her home.

4. *Keeping of Records.* Card catalogues are kept, giving the full data obtainable in each case: (1) for girls applying for positions; (2) for girls placed; (3) for employers visited; (4) for employers applying or worth investigating, but not yet visited. All data from employers and girls which have been obtained from the blanks before mentioned or from other sources are recorded on the cards.

The Placement Bureau, in addition to its specific work, performs certain services for the general benefit of the school. Data are obtained as to the conditions of work and wage in certain trades and the length of training advisable in others. Advice from the trade is often needed in one or another of the departments, and through the Bureau's acquaintance with employers, managers, or foremen and forewomen, it is able to ascertain and report their expert opinion. It is also possible to induce some of these busy people to come

and view the problem in the light of conditions at the school as well as in their own business.

General Results

Although the Placement Bureau is still in its infancy, some results may be recorded. It is already in touch with some 700 employers, about 550 having been personally visited. The table below gives the facts as to placements in former years, and may be interesting for comparison.

GIRLS PLACED AND REPORTED UPON

	By Self or School.	By Alliance Employment Bureau.	Total.
1902	0	0	0
1903	39	7	46
1904	52	36	88
1905	29	61	90
1906	22	81	103
1907	10	77	87
1908	119	39	158
1909 By school	157	1	158
	428	302	730

This refers merely to the original or first placement of a girl. The total of *re*-placements for 1909 was an additional 230, including those of many former pupils

who had heretofore placed themselves or been placed by the Alliance Employment Bureau.

The crucial question of wages is one that is extremely difficult to deal with in brief. The accompanying table gives a very general statement as to the range of wages obtained by graduates and the future possibilities in their trades, and read in the light of the comment below it is as specifically accurate as any "summary" can be.

Trade.	Wages When First Placed.		After Two to Five Years.	Future Possibilities.
	1903	1909		
Dressmaking .	$3 to $5	$4 to $6	$6 to $13	$25 or own establishment
Millinery . .	2.50 to 4	4	5 to 15	12 to 25 or own establishment
Operating . .	3 to 6	4 to 11	6 to 25	15 to 40
Novelty . . .	4 to 5	4 to 9*	6 to 11	18 to 25
Art since 1907	5 to 8	4 to 7	7 to 15	20 to 30

*This maximum is not in paste or glue work, but in the silk lampshade trade.

The column for 1909 shows that at last a minimum wage of $4.00 has been established for all the trades named, even Millinery. There are exceptions, but they are almost always due to some special disability on the part of the girl, and do not fairly affect a statement regarding the wage for girls of normal capacity, who have done satisfactory work during their course. The small percentage of pupils who fall below $4.00 for their

initial wage are those who either did not complete the school course, or who did poor work, or who are sub-normal mentally or handicapped physically, or can work only an eight-hour day because they are under sixteen. It is true that when they are obliged to start on piece-work instead of a week-wage their earnings may fall below our minimum for a short time, but the first week or two is in that case not usually a fair test of the girl's training or ability. Some little time is necessary for the readjustment involved in the change from school to workroom, and especially for attaining the "speed" necessary to earn a fair wage on trade piece-rates. The compensating advantage is that when she does begin to "make good" her improvement is usually registered in her earnings more quickly and accurately than it would be by the safe but slowly advancing "week-work." If after two weeks, however, the girl is earning less than $4.00, and thinks she "never can make out there," she is given an opportunity to change her place. But very often there is a sudden jump in earnings after ten days or so, as the girl gains confidence and speed. (One pupil earned $3.97 her first week on buttonholes, and over $7.00 the second.) Another point to be considered in connection with the wage is the length of the season and the duration of any one place. The comparatively steady work and regular, if small, advance in the dress-making, for instance, will often counterbalance the larger week-wage or piece-work earnings of the trades where the season is short or the positions of uncertain duration.

On the "rate of advance" in wage the Bureau is as yet too young to make any general statements.

Students' Aid

On account of the extreme poverty in the families of many of the students, some system of aid has always been necessary. The manner of giving it has changed, however, that it may be free from all tendency to pauperize or to deprive the recipient of self-respecting effort. At first it took the form of a scholarship, paid at the school every week, in equal amounts, to each student. A few months' experience, however, showed that it would be better to require a month's apprenticeship without pay. If after that the girl was allowed to continue her course, she was given a dollar a week during her second month. Each month thereafter the amount was increased according to the skill and good spirit which were evident in her work. The maximum amount a student could receive in one year was $100.

Early in the second year it became clear that a still more radical change was advisable, and a plan was adopted whereby the need of the girl's family became the only basis upon which money was given. A committee was formed, whose membership was composed principally of workers from the leading social settlements. Each applicant for aid was referred to the member of the committee living nearest her home. An investigation was made by the settlement worker, and aid was given in proportion to the necessity, varying in amount from car fare to the equivalent of a small wage. The girl went weekly to the settlement for the money. In this way the aid was separated as far as possible from the school atmosphere, and it was made clear to the girls

and their families that the money was in no sense pay for work. As indicative of this change in viewpoint, the term "Scholarship" was replaced by that of "Students' Aid." In addition to its other advantages, the new method reduced the cost for aid to less than one-half of its original proportion.

Since this time the aim has been always the same—to aid the girl handicapped by poverty so that she might prepare herself for efficient wage-earning. A member of the school staff is secretary of the Students' Aid Committee, and she knows personally every applicant wishing aid, and makes the initial visits and investigations. This plan has proved advantageous in making a closer connection between the school and the home, and in securing a more uniform standard of relief.

The Students' Aid Committee consists at present of representatives from sixteen settlements, who meet twice a month to discuss and decide upon the merit of each applicant. If aid is granted, the girl is assigned to the settlement nearest her home and goes there weekly for her money. An envelope showing the amount due the girl is sent from the school to the settlement worker, and on this is indicated any absence or tardiness. It is one of the duties of the member of the committee to inquire the reasons for any irregularity in attendance, and, if necessary, to report to the parent. In addition, each settlement worker renders valuable service by giving friendly oversight to the girls and families in her group, by doing as much for their welfare as time will allow, and by reporting any unusual conditions to the Students' Aid Secretary.

Students are at times sent to the school for instruction with a request for aid from some charitable institution, church, hospital, school, or settlement which knows and is interested in the family; but, in general, a girl needing financial help comes without such recommendations, and consequently a more thorough investigation of the case is necessary. Inquiry is always made at first of the Charity Organization Society, in order to learn whether her family has received or is receiving other relief. The "trial month" without aid gives time for the gathering of facts about the family, and for a test of the girl's ability and character. Aid is never promised to a girl before her admission.

A useful method has been worked out for determining the amount of aid which may be given in any one case. The total amount of the family income is obtained, and from it are deducted the fixed expenses for rent, insurance, and car fare. From the remainder the per capita income is found which must provide for all other expenses, that is, for each person's share of food, clothing, light, fuel, medicine, and all incidentals. It was estimated that a family could not maintain a decent standard of living on a per capita income of less than $1.50 a week. Although each case is considered on its merits, aid is almost always given when the per capita income is less than $1.50; in some special cases it is granted when the income exceeds this amount. The following table shows the income of the seventy-eight families that were being aided by the school on June 3, 1909.

Weekly per Capita Income.	Number of Families.
$ .00 to $ .49	16
.50 to .99	26
1.00 to 1.49	20
1.50 to 1.99	10
2.00 to 2.49	3
2.50 to 2.99	1
3.00 to 3.49	2

Relief given by charitable institutions has not been included in this income.

Each girl receiving aid is told the reason for its bestowal in such a way that she will neither look upon it as money earned nor feel humiliated as a recipient of charity, but will understand that it should mean for her an opportunity to obtain a good education. It therefore is incumbent upon her to show a realization of its value by becoming a responsible and earnest worker. Students receiving such assistance are expected to attend regularly, unless for excellent reasons, and the reports from their departments must be satisfactory in regard to their work, attitude, and effort. If a girl varies from this standard and, after talking with her or with one of her parents, no improvement follows, the aid may be suspended or withdrawn. Improving circumstances in a family occasionally make it possible to decrease or even to give up the aid. On the other hand, it is often found

necessary to ask additional assistance from special philanthropic sources when the need is very great.

Night Classes

Night continuation classes are a part of the aim of the school. They have offered training in expert parts of the Operating, Dressmaking, Novelty, Millinery, and Art trades. The classes were well attended, the work successful, and continued application for the renewal of the instruction has been received. This class of education requires the most skilled teachers and is consequently expensive. Lack of money to conduct both the day and the night work adequately has made it necessary to close the night classes temporarily. There is every reason to hope, however, that they will be reopened in the near future, with still greater facilities for teaching the advanced parts of the trades.

Student Government

The Student Council concerns itself with the government of the school, the aim being to place it as far as possible in the hands of the students. It also assists in developing their sense of responsibility. The Council is composed of representatives elected from each class, who have been chosen for their executive ability and good character. They meet once a week with one of the supervisors to discuss questions of general school discipline and regulations. Each member is responsible for maintaining order in her class when it is not under other supervision, for settling disputes among the girls, and for reporting disobedience to school laws.

Graduate and Department Clubs

Some form of alumnæ association has been in existence since the end of the first school year. This important phase of the Trade School work is now thoroughly organized, and gains for us the warm cooperation of those who have benefited by the instruction. The Graduate Association includes those who have received the certificate of the school; the department clubs, however, are more democratic, and admit to membership any girl who has been in attendance. These associations work together for the benefit of the school. They hold frequent business as well as social meetings. They plan definite ways for getting in touch with Manhattan Trade School girls who are just entering trade, in order to help them to adjust themselves to their work and to increase in them loyalty and responsibility to the school; for improving themselves and working girls in general by discussing topics of interest concerning their trades, and by giving entertainments which are of real interest and value. They have carried out schemes for adding to the general finances of the school or for obtaining money for special objects, such as shower baths for the gymnasium. They have given several suppers to bring the faculty and former students together, in order to discuss informally trade and school matters.

PART II

REPRESENTATIVE PROBLEMS[1]

THE organizing of a girls' trade school in any given locality necessitates the meeting of many problems of a serious nature. Some of these appear immediately and require consideration before a satisfactory curriculum can be developed, but most of them are hydra-headed, and one phase is no sooner settled than another arises. Attention must be given to them whenever they come if any progress is to be made in solving the question of the broadest and yet most practical education for the girl who must earn her living in trade. These problems are so connected with the keenest yet most obscure social and industrial questions of the day on one hand, and, on the other, with the future of the race, that they are often very puzzling. Some of them can never be entirely settled, though they can be temporarily adjusted to immediate needs. The following are selected as representative.

Direct Trade Training

Many schools of a domestic or technical nature have been opened in the United States, but the instruction in them is for the home or for educational purposes rather than for business. The trades, if they are represented at all in these schools, are general in character, covering often many branches of an industry in a short series of

[1] In order to explain these problems, it will be necessary to repeat some of the data in Part I.

lessons, and not having the particular subdivisions and special equipment which are found at present in the regular market. Employers of labor have not been favorably impressed with the practical usefulness of the graduates in their workrooms. As the sole reason for the existence of the Manhattan Trade School is to meet this requirement of employers, and therefore to develop a better class of wage-earners directly adapted to trade needs, the instruction must be in accord with methods in the shops and factories of New York City. Such specific trade education for fourteen-year-old girls was new, and therefore the problem of organization had to be faced for the first time in America. Careful study of the workrooms and the industrial conditions of New York City was essential before the aims or the curriculum could be decided upon and the school could be opened for instruction. Furthermore, if the training is to be kept up to date this study of trade conditions must not cease, and readjustments of the curriculum must equal the changes taking place in the outside workrooms. Consequently these problems must be met repeatedly.

Need of Preliminary Training

On beginning the trade courses at the school a difficulty was discovered immediately which brought home the truth of the complaint made by trade that young workers are utterly incompetent. The students coming to the school were allowed by law to enter trade, as they had met all requirements for obtaining their working papers, but they were not found to have sufficient

foundation to begin the first simple steps at the school without some preliminary training. The defects which were especially evident were: (1) lack of sufficient skill with the hand; (2) inability to utilize their public school academic work in practical trade problems; (3) dullness in taking orders and in thinking clearly of the needs which arise; (4) absence of ideals; and (5) need of knowledge of the laws of health and how to apply them. Preliminary, elementary instruction in all of these subjects had, therefore, to be organized and given to the entering students before they could begin upon their true trade work. Such instruction is and will continue to be necessary unless the public elementary school arranges to give, between the fifth and eighth grades, a more satisfactory preparation to those who must earn their living. The Manhattan Trade School has been obliged to give from two to eight months to elementary branches of instruction alone. The kind of work needed varies constantly with the condition of the students. Every one requires some of it, but many must take months of tutoring. Public instruction could readily give the practical academic work which the school has organized. Such instruction would not only directly help the pupils who must leave early to work, but would lay a good foundation for the vocational education which is being planned for the early years of the public secondary schools.

Vocational Training

As the courses at the Manhattan Trade School developed, an intermediate phase between the preparatory

work and the direct trade training took definite shape. This middle ground partakes in many ways of trade processes and lays a good foundation for shop work. It utilizes the early education, gives point to it, awakens in the student enthusiasm for her chosen trade, and shows her that it is worth her while to work hard if she would succeed. It takes from four to eight months, according to the student's ability to meet the requirements. Public instruction could also develop this intermediate field to advantage for those who, not wishing to enter the regular high school course, would be glad to avail themselves of further practical education. Such occupations for women as cooking, sewing, garment and dressmaking, millinery, laundry work, home nursing, household administration, care of children, novelty work, electric power operating, salesmanship, and other interesting activities can well be offered in Vocational Education. As the student in her chosen field plans, considers expenses, and contrives to utilize her material she gains skill, adaptability, judgment, and the true basis of criticism. The world's work interests her as its meaning becomes clear through her own experiences, and she begins to see ways to better her condition and to be a factor in the improvement of her home. She appreciates the value of her early education, and finds it worth while to think clearly and to act wisely; she listens to instructions, asks sensible directions, and goes to work without waste of time. The elementary and intermediate training just described, which the school found it must give preparatory to its real trade instruction, has proved advantageous as an introduction, for the student can

now quickly adapt herself to the work in the school shops, as she possesses the foundation qualities needed to make the best worker. She has to begin at the simplest trade work, to be sure, but can rise as rapidly as she shows ability. She has been carefully watched by her instructors and turned gradually in the direction best fitted to her.

Trade Shops

Offering courses in many varieties of trade work exactly as they are found in a city like New York has many recurring difficulties, as has been before stated. The constant and rapid adaptations to fashion, the new mechanical devices introduced, and the labor situations are factors to be considered. The management must be ready at a moment's notice to change, increase, or drop work according to the demands of a fickle market. It would seem, therefore, that at present the problems of the school trade shops are of too serious and unsettled a character for adequate solution by public instruction as at present organized, for (1) it would be difficult to persuade the mass of taxpayers that added tax rates are advisable for beginning a continually altering form of education which has not yet commended itself to all employers or to all wage-earners, and which must be more or less expensive; (2) the usual public school committee man knows little of trade conditions, and would probably be averse to allowing a school the freedom to change at will its course of study and even the very trades it teaches; yet, on the other hand, if the trade school must wait for board action before altering its plans, it would prejudice the value of its instruction,

which must be flexible if it would train its students directly for the market; (3) the impossibility of obtaining its teachers from the usual "waiting list" and the difficulties attending the selection of a satisfactory teaching force.

The possibilities for offering highly specialized, skilled work are great, but the poverty of the students limits their time at the day school. To help all girls who work, and who wish to get ahead, night classes have been organized from time to time, and during the day also temporary instruction is offered to any one who has a slack time in her trade. As the school is organized into trade shops, with the same specialization as in the market, a student can enter or be placed from almost any point. This increases its usefulness but complicates its management.

Obtaining and Training Teachers

As trade instruction is new in education, the normal schools have not begun training teachers regularly for these positions, nor, indeed, are they yet prepared to do so. The organizer of a trade school faces, therefore, a serious difficulty in obtaining instructors who are adequate to the task before them.

The following trade teaching staff is needed: supervisors of the various trades; forewomen to direct the school shops; trade instructors to teach the various groups of students the specialized processes; assistants to attend to minor matters in the workrooms; art teachers, who have had experience in designing for the various trades represented; academic instructors who

know the working world practically and can give the students a training which, while helping them in their trades, will broaden their knowledge of and sympathy in the world's work. All of these teachers must not only have had experience in trade, but must continually keep in touch with the methods of the outside market. Unsuccessful trade workers, who often wish to teach, or teachers who know nothing of the needs of trade workrooms, cannot adequately prepare students for specific trade positions. Trade knows what it wants, is a severe critic and an unsparing judge. The trade school, therefore, cannot afford to rely on instructors who would be themselves unsuccessful in the market, for the result would be certain failure in the students. Such specific training requires exceptional knowledge in its teaching force. The usual teacher of manual training knows too little of the ways of the workrooms and is too theoretical in her instruction to be trusted to train workers who must satisfy trade demands. On the other hand, the trade worker, good as she may be in her specialty, seldom knows how to teach. She can drive her group of workers, but she cannot train the green hands to do more than work quickly at one thing. She can make them work, but she cannot make them better workers. When she has orders to turn out, her lifelong training makes her think of the rapid completion of the articles rather than the careful development of the students who are making them. If she is not watched she will choose the girl to do a piece of work who can do it well and quickly (but who does not need this experience), rather than the one who should do it in order to have practice in it.

The problem is to find a way to unite the good teacher and the successful worker. Such a combination appears at rare intervals. At the present time the teacher who can adequately prepare young workers for trade has to be taught while she is herself teaching. She may be chosen from either the industrial or the educational field, if she has certain qualities of mind and spirit, but she must now make up the points she lacks, be it experience in trade or ability to teach. Supervisors need special insight and capability, as they are called upon to investigate a new and difficult field, to select from it the subjects needed, and after that to organize education of a most practical kind. They combine the duties of school principal, teacher, forewoman, factory superintendent, and business manager. They must be willing to give themselves to the cause, as they are responsible for the conduct of their departments throughout the year, at night as well as during the day, at least until they can train some one to whom they can delegate some of their responsibility. They need a broad, cultural education and, at the same time, interest and knowledge of the industrial problems of the time, as well as experience in their particular trade. They must have sympathy with the working people and their lives. It is evident that such women are hard to find, and when found or when trained are in demand by other institutions or in business life, in which places they can command high salaries. All efficient trade teachers also are equally in demand in workrooms, hence the school must compete with good business salaries in place of the usual underpay of educational institutions.

In addition to the trade teachers, practical instructors in healthful living and special secretaries needing social knowledge of various kinds are also essential in the modern trade school for girls. Their training adds to the director's responsibilities, for no one at present has the knowledge and experience necessary.

The many problems connected with obtaining an adequate teaching staff seem at present to have but one solution, *i. e.*, the school has to be its own training school for its faculty to a greater or less extent. One source of assistant teachers has been found in students who have made good in trade. Pupils of fair education who show skill and executive ability in their department work and who later succeed in their trade positions have already proved helpful when brought back to the school. Such girls know the courses of instruction, their needs and difficulties, and also the outside workroom demands. If they are given some hints in methods of teaching, their success is greater. European trade schools for girls have drawn many of the best teachers from the student body and have organized teachers' training classes for them. A course of regular training for trade pupil teachers should be given later in American training schools to meet this situation.

Courses of Study

As the changes about to occur in the market must be recognized and inserted in the curriculum in time for the students to be prepared for the new work when they are placed, set courses of study cannot be followed without endangering the practical value of the teaching.

Furthermore, the pupils must be advanced as they show ability, and their different characteristics should have consideration; hence the work must be sufficiently flexible and adaptable to allow for increasing one kind of training and decreasing another, in order to develop a girl's best ability. It is not the trade courses only which should be fitted to the need, but the trade-art, trade-academic, and physical education must also shift and introduce needed material as quickly as would the market grasp at new plans for the workrooms. Nor is it sufficient that the curriculum should adapt itself merely to training girls for trade positions. It is never to be forgotten that these students are to be made into higher grade workers and citizens, and that the greater number of them will marry. In general, it can be said that woman's entrance into industry is more or less temporary in that it is apt to precede or to follow marriage, and, as a rule, is not continuous. Good citizenship for these young wage-earners should mean the better home as well as the broader views of industrial life. The inserting into an already too brief training the important factors for making the better home-keeper requires study of the ethics and economics of home and social life in addition to the study of the industrial situation, and places continuous problems before the faculty.

Investigations

In order to be in vital touch with the practical needs and changes of the market, special investigations of trade have been and are continually conducted by the faculty of the school. Effort is made by them also to keep in

close contact with industrial and social organizations of workers in settlements, clubs, societies, and unions, that all phases of the wage-earner's life, pleasures, aims, and needs, may be appreciated. The pupils in attendance are studied to know their conditions of health, their tendencies, their needs, their improvement. After their entry into trade they are kept in touch with the school through the Placement Bureau, clubs, graduate associations, and also by visits from the school's investigator, in order to note the effect of their training on their self-support, their workrooms, and their homes. Groups of trained and untrained girls are compared, that differences and benefits may be noted and the true situation may be clearly understood.

That the essentials of this class of education might be grasped as far as possible, the director of the school made a six months' investigation of the professional schools for girls on the continent of Europe. This study was made after the Manhattan Trade School had been organized and was running successfully. The problems were then well in hand, and advantage could be taken the better of differing standpoints. In some European countries such practical instruction has been established for half a century. Each country has organized the work according to its own view of woman's position in industrial and domestic life. Many aspects of the problem can therefore be studied and various courses of instruction consulted. This investigation covered three interesting fields. First, the organization of the schools, including the equipment; the teachers and their training; the budget; the order work; the relation of the school

to employers; the placing of the girls in positions; the wages; the schemes for financial aid, and the work of the alumnæ associations. Second, the trades taught and the courses of instruction; the general education required at entrance and that given as an integral part of trade; the trade-art courses; the housekeeping and training of servants; the development of ideas of better living and the training for responsibility in home and trade life. Third, the visiting of workrooms employing women; the obtaining information on the effect of trade schools; the students' usefulness and ability to advance, and a survey of the crafts conducted in the homes of the people.

Trade Order Administration

A trade school must do its skilled handwork in the fashion of the day and on correct materials, yet the students are too poor to work for themselves. A school budget cannot supply such large quantities of valuable materials unless it can get some return for them. The school shop in each department, where orders both private and custom are taken, has proved advantageous, but involves great problems of administration: (1) the actual business methods and management connected with the invoices, sales, and delivery of goods; (2) the obtaining of orders needed and of the quantity desirable; (3) the taking of custom orders, fitting the customer, and delivery of orders on time; (4) a satisfactory apportionment of the order work so that the students may profit by it and not be expected to continue it after they have had sufficient experience of one kind, or if they are not yet able to do the elaborate work involved;

(5) the finding of operatives who will do what the students cannot or should not do; (6) the expense involved in employing workers at trade prices and for shorter hours; (7) the cost of articles, and other details which are involved in entering into competition with trade. It may be stated that no trade school should underbid the market, but should charge the full prices and expect to give equivalent returns. A trade school cannot afford to be an amateur supported by a philanthropic public, but must have a recognized business standard.

Placement

Problems of varied kinds meet the school in placing its students. Each new enactment of child labor or industrial laws has its influence. Even a good law will sometimes have a temporary serious effect in lowering wages or turning capable girls out of satisfactory positions. Care must be exercised that students are not placed where there is a possibility of running counter to the best interests of labor. The desire to place each pupil where she can develop to her highest condition requires continual knowledge of the market needs and of the characteristics of the many girls. Records of students entering, studying, and placed, the kinds of positions open, and industrial and labor information must be kept up to date, yet such data are often hard to secure.

Trade Union Attitude

An important question that is always before a trade school is the effect the instruction may have on the working people. It is difficult for one not continually

in the midst of the pressure of the actual trade to know the many ways that thoughtless advance in trade teaching may react to the disadvantage of the very ones that the school wishes to help. Injury may be done by preparing too many for certain occupations, filling places where a strike is on, replacing well-paid positions with trade school girls at a less price, placing the girls at too small a wage for their skill, doing order work at too low a price or when a strike is on, considering too closely the fitting of a worker for the employer's benefit rather than for the broadening of her own life, and like thoughtless actions. The difficulties of the situation are great and the solution frequently obscure, but a fair-minded school must be in touch with the effort the working woman herself has inaugurated to better her condition. The apparently unnecessary suspicion with which the laboring class regards the organization of trade instruction would have foundation if no thought were given to the trade conditions as the working girl sees them. A trade school for fourteen-year-old girls need not make a point of their immediate entrance into unions, but it should consider the subject simply and wisely in all its bearings, that the students may know the full aims and advantages of coöperation as well as the point of view and many difficulties of the employers.

Contact with Trade

The faculty of a trade school needs the coöperation and assistance of the working people and the employers of labor. Only through intimate interrelation with them can the best and most practical results be obtained.

Auxiliaries and committees of employers and of wage-earners; visits of the staff of the school to trade, and of employers, forewomen, and workers to the school; the carrying out of orders for workrooms and assisting them at busy seasons, are some of the ways by which the Manhattan Trade School has tried to gain the help of the busy industrial world.

Problems of Financial Aid

The aid given to enable the poorest students to attend the school has brought its own questions, such as: the danger of pauperizing the recipients; the methods of selecting the beneficiaries; the best way to give the weekly aid; the development of a spirit of earnest work and regular attendance in the girls thus aided; the stimulation of a desire to return some equivalent in special helpfulness to the Manhattan Trade School or to its students, and the eliminating of this philanthropic effort from any apparent relation to school work.

PART III

EQUIPMENT AND SUPPORT

Housing and Equipment

THE first home of the Manhattan Trade School was a large four-story and basement dwelling house, for which a rental of $2,100 per annum was paid. The initial permanent equipment and first temporary stock provided for one hundred students, and cost $9,500. This amount was utilized principally for the furnishing of special rooms for electric power operating; for sewing; for dressmaking; for millinery; for pasting; and for the more general equipment of offices, academic and art rooms, a kitchen, and a lunch room. The following lists show the range of expenses for furnishing the main workrooms with necessary equipment:

GARMENT OR DRESSMAKING WORKROOM

Sewing machines, each	$18.00 to $70.00
Work, cutting, and ironing tables, each	6.00 to 20.00 upward
Electric irons, each	7.75
Gas stove (necessary when electric irons are not used), each	2.00 upward
Cheval glass, each	20.00 to 100.00 upward
Chairs, each	.50 to 3.00 upward
Exhibition, stock closets, cabinets, and chests of drawers, each	10.00 to 100.00 upward
Fitting stands, each	2.00 to 30.00 upward
Fitting room (a curtained alcove), each	10.00 upward
Fitting room (a furnished room), each	100.00 upward
Dress forms, per dozen	30.00 upward

Waist forms, per dozen	$6.00 upward
Sleeve forms, pair	1.00 to 1.50 upward
Lockers, per running foot	3.00 to 8.00 upward

A room for twenty workers may be plainly furnished at a cost of $300 to $500. If a large number of expensive sewing machines are desired, the estimates must be increased by several hundred dollars. The Manhattan Trade School has forty foot-power machines of the kinds most in use in the workrooms of New York.

The equipping of a workroom for electric power operating, including general and special machines, motor, cutting and work tables, cabinets and chairs, will be considerably more expensive than the one for garment making. In the latter, one sewing machine can be used by several workers, but in electric operating each worker must have her own machine. The electric motor adds also to the expense. The minimum cost of equipping a shop for twenty workers would be $1,000 to $1,500. The necessary equipment would be as follows:

ELECTRIC OPERATING WORKROOM

Plain sewing machines in rows, per head	$22.50 upward
Troughs for work between the rows and tables for the machines (per every two machines)	10.00
Special machines (two needle, embroidery, lace stitch, buttonhole, straw sewing, and the like), each according to kind	35.00 to 125.00
Motor, each	140.00 upward
Electric cutter, each	25.00 upward
Cabinets, tables, chairs, and irons, see above	

The Manhattan Trade School has fifty-five plain electric sewing machines and thirty-two special machines, as follows: three buttonhole, one two-needle, one binding, one zigzag, five hemstitching, five tucker, four Bonnaz, one braider, one hand embroidery, one scalloping, nine straw sewing.

In workrooms conducting trades which use paste, gum, and glue, the following special equipment is required:

Glue pots, gas, each	$7.50 upward
Glue pots, electric, each	21.75 upward
Hand cutter, each	50.00 upward
Cabinets, tables, chairs, see above	

The cost of equipping a shop would be from $200 to $400.

Special machines for perforating designs or for pleating materials are often needed in teaching the garment trades. Wholesale prices can usually be obtained when the order is large. Dealers have also shown themselves willing to sell their machines at low prices, to loan them, and even to give them to a school which has proved its ability to train good workers.

When it was appreciated that the original quarters of the school were too limited, the Board of Administrators went to work with great enthusiasm and in a few months collected the requisite money and bought a large business loft building at 209–213 East 23d Street, at an expense of $175,000. To put it in order for work cost $5,000 in addition. The former equipment was used and $5,000 more was spent for such needed items as: machines, $3,200; motor, $352; perforating machine, $38; additional master clocks, $233; chairs and tables, $850. The school is furnished in a simple, businesslike manner, the equipment merely reproducing good workroom requirements, *i. e.*, essentials only.

The budget for the first year, 1902–1903, was $22,094.16, of which the salaries for teachers took about one-half and the rent and maintenance covered the other half. During this year there were 113 students admitted. In 1908–1909, after six years of rapid growth, the educational budget is $49,000, or more than double the original, of which the salaries are $38,806; the supplies, $1,710; printing and publishing, $600; maintenance, $9,900. At the beginning of 1908 there were 254 students in the school; 689 were registered during the year, making a total of 943 girls, being almost nine times the number in attendance during the first year.

The Support

The Manhattan Trade School has depended for its support entirely upon voluntary contributions. There have been few large donations and the donors represent all classes of the community—patrons of and workers in sociological, economic, philanthropic, and educational fields, employers of labor, and auxiliaries of many kinds of workers organized for special purposes. The most significant help, perhaps, and the largest in proportion to its income, has been that of the wage-earners themselves—not only the girl who has benefited by the instruction, but the general mass of women workers. These women, knowing the difficulties in their own struggle to rise, have shown themselves willing to set apart weekly a small sum to help young girls to attain quickly efficiency through systematic training. The auxiliaries of wage-earners are a mainstay of the school on account of their helpful enthusiasm, their

practical suggestions, their interest in girls trained there, and their regular subscriptions on which the Board of Administrators can depend.

PART IV

OUTLINES AND DETAILED ACCOUNTS OF DEPARTMENT WORK

The Faculty and Staff

THE original staff of the Manhattan Trade School, 1902–1903, consisted of a Director, an Executive Secretary, 4 supervisors (Operating, Dressmaking, Pasting, and Art), 5 instructors and forewomen, 4 or 5 assistants and occasional workers, a janitor, and 2 cleaners. The present staff, 1909–1910, consists of (1) *Office Administration*, 11: Director, Executive Secretary, Assistant Secretary, 2 Stenographers (office and placement), Placement Secretary, Investigator, Business Clerk, Buyer, and 2 Assistants (records, telephone, etc.). (2) *Teaching Force, Supervisors, and Assistant Supervisors*, 7: Dressmaking, Dressmaking workroom, Electric Operating, Millinery, Novelty, Physical Education, Art. *Instructors, Teachers, and Forewomen*, 11: Academic, 2; Dressmaking, 3; Operating, 5; Art, 1. *Assistants*, 14: Dressmaking, 7; Novelty, 3; Operating, 1; Physical Education, 2; Art, 1. (3) *Doctor*. (4) *Care of Building*, 7: Engineer, Janitor, Machinist, Cleaners 2, Elevator boy, and Night watchman.

ADMINISTRATION

Admission Requirements

I. Age: fourteen to seventeen years. The law requires a child to remain in public school until fourteen.

The Manhattan Trade School has found that under fourteen a girl is too immature to specialize in trade work, and that over seventeen most girls are too mature to fit into the work planned for the majority of the class.

II. Public School Grade: 5-A or above. The subject matter of 5-A grade or its equivalent is required by the state before a child can leave to work. If for illness or other good cause a girl has not made this grade, she is admitted to the Trade School with special permission of principal of last school attended, and, while studying her trade, the necessary amount of schooling is made up to her by special classes and coaching. The Board of Health recognizes this substitute.

Grade of girls admitted since beginning is shown in following table:

GRADE UPON LEAVING SCHOOL

	Below Fifth Grade Per cent.	Fifth Grade Per cent.	Sixth Grade Per cent.	Seventh Grade Per cent.	Eighth Grade Per cent.	Graduate Per cent.	High School Per cent.
1902	8	19	35	26	2	10	0
1903	11	18	19	29	6	15	2
1904	6	11	15	25	16	25	2
1905	7	15	19	19	17	19	4
1906	8	16	20	23	17	13	3
1907	7	10	25	23	15	18	2
1908	4	15	26	20	13	16	6

During 1908, 143 older women were admitted to a special workroom opened for the "unemployed."

III. Filing of working papers is required of girls under sixteen.

1. No girl under sixteen can work in New York unless she has an Employment Certificate issued by the Board of Health, and then only from 8 A.M. to 5 P.M., or for eight hours daily.

2. The public school last attended by the girl is responsible for her until she is sixteen, or has her working papers, or is dismissed to another school. If dismissed to Manhattan Trade School her attendance there cannot be made compulsory, and she may attend a few days and then leave and work illegally. Our facilities for following up such cases are limited. With her working papers on file we know she is not evading the law, and can dismiss her to work if she is not a success in trade lines of training.

3. Exceptions: Lack of proper birth record, on account of foreign birth or failure to make record of it by officials, may prevent the obtaining of an Employment Certificate. A special provision is made by the Board of Health in such cases, and, pending adjustment, the girl is admitted upon notice of date of future issuance.

IV. Reference: Some reliable person's name is required of each applying student, in order to have some one to communicate with in case of difficulty of any kind.

V. Application in person: Each girl fills out an application blank giving name, address, and birthplace of self, father, and mother, public school attendance,

previous trade experience, if any, trade desired, reference. This must be written at the school, for the manner in which it is done is a large part of test for admission.

Times of Admission

The school year begins in July, but a girl is admitted any Monday when there is a vacancy in the department she wishes to enter. The following table gives record of yearly admission:

Nov. 2, 1902 (first day)	20
Rest of 1902	93
1903	139
1904	193
1905	239
1906	328
1907	433
1908	689
1909	517
Total	2,651

Some of these students did not remain long enough to take a thorough training, for home demands made even a small wage imperative, and the girl had to join the ranks of earners ill prepared. Some were not adapted to trade conditions, and soon fell out by the way. Many persisted until they took more than the

average twelve months' course, and went into business at a proportionately higher wage.

Records

I. Attendance: 1. Daily, Monday to Friday inclusive. The factory method of time cards punched by a clock upon entrance and leaving has been adopted as being most exact, businesslike, and time saving. It registers the exact time when rung, and so indicates tardiness as well as absence.

2. Weekly. A small filing card ruled for fifty-two weeks summarizes the daily record of time cards and requires the marking attendance only once a week. This file is subdivided into departments and again into classes, so that the statistics of enrollment are easily gathered.

II. Individual records: 1. Upon admission a record card is started for each girl, no matter how long she may attend. This contains (1) the data given upon the application blank copied in detail; (2) Student Aid, if given, amount, date, and remarks.

2. Upon leaving, entries are made on the same card of (1) date and cause of leaving; (2) record in different departments—Art, Academic, Trade, and Health; (3) certificate—kind, record, date. This is not granted until the pupil has proved satisfactory in her trade both in the school and in business; (4) Trade Record—upon the reverse side of the card is the "record in trade after leaving school," with columns for date, employer, kind of work, wages, remarks. This is kept up by the Placement Secretary by frequent visits and letters, and gives the basis for many valuable deductions as to the practical results of the training.

III. Other records kept in departments are (1) Student Aid: application and information; (2) Health: examinations upon entrance and future reëxaminations; (3) Department: records of each girl as she passes from class to class, such as "attitude," speed, and skill.

Length of Year

The school is in session forty-eight weeks each year, four weeks being given up to one-week vacations at Christmas, Easter, Fourth of July, and Labor Day. The summer session is the beginning of the regular work, and not a unit for summer training. No one is admitted for the summer only, as the time is too short for real trade standards to be approached.

Tuition

The tuition is absolutely free. The Manhattan Trade School aims to reach the poorest girl who has little chance to advance rapidly unless some one gives her a lift. In order to do this most effectively it is sometimes necessary to assist her. (See the report of the Student Aid Work.)

Choice of Trade

A girl upon application can select the trade into which she wishes to go. If after a month's trial she proves competent, she is allowed to continue; if not, she is advised to change to another department or to seek employment in work not taught at the Trade School. If a girl has no choice of trade because of ignorance of possibilities, she is shown the kinds taught and given

a chance to make a selection. If then she is undecided, she is advised to take what seems best adapted to the time she can spend and the type of girl she appears to be.

Business Management

However simple a school is, some bookkeeping is necessary, and when with the running of the school is combined the management of trade order supplies and receipts the problem becomes very complicated. (See Trade Order Work.)

I. General: A system of up-to-date bookkeeping of General Ledger, Invoice Book, and Daily Exhibit, with details worked out in Petty Cash and Maintenance Books, has been adopted. These few simple books so distribute accounts of expense and receipts that one can soon see the standing of the whole school or of a single department. All bookkeeping is centralized in one office, except the taking of orders and the details of filling them, which must be in the hands of the department concerned.

II. Departmental: 1. Requisition blanks for purchases made. 2. Order blank and duplicate for order given by customer. 3. Time slips, wherever possible, to get exact record of time value of work done. 4. Material slips, to keep account of what has gone into any orders. 5. Final billing, to give data for bills sent out from main office and duplicate filed there for final records.

The Power Machine Operating Department

Aim

To train girls to work on sewing machines run by electric power and to put a thinker behind every machine as its operator. The department hopes by awakening intelligent interest in the tool, *i. e.*, the machine, to kindle ambition in the workers. It is only through the intelligent use of the tool and consequent love of work which follows that we can look forward to supplying the skilled machine workers of the future. This training must be given while the girls are in the formative period, to develop habits of thought and action which will counteract the bad effects upon the worker that follow division and subdivision of work, with consequent subdivision of ability, which takes place in all factories today. When a pupil has been thoroughly trained in the intelligent use of her tool, when she has learned to construct complete garments, if she is then, through force of circumstances such as modern production entails, compelled to carry out one process on the machine indefinitely, or to make one part of a garment, she still holds the balance of power in being prepared to do something else when opportunity or necessity demands.

General Steps in Training

I. A pupil must be given a short time to adjust herself to the workshop environment, consequently she is put first at some simple work, such as ripping or cutting up old garments. This gives her freedom while using her hands to look about the workroom and to get

accustomed to the sight as well as to the sound of machines in action.

II. The pupil is taught to control the power by which the machine is run, and is then given an intelligent understanding of the mechanism of the machine or machines she is to operate.

III. The pupil then begins her regular course of work, and her feeling of responsibility of the value of *time* is awakened—that is, her seconds, minutes, and hours, days, weeks, and months are now important factors in her life, and they may be used for good or evil. In the language of the department, time may be spent wisely or foolishly, and, while studying at the Manhattan Trade School, seven hours out of every day of the girl's life is given over to productive work and should be accounted for. The department has developed its own plan of time payments, which is much like the piece-work system employed in trade. Through its rewards for time well spent it makes the fact real to the pupils, as no form of punishment could do, that wasted time is gone forever.

The department is divided into five classes, three of which must be taken to make an all-round operator, namely: Elementary, two months' course; Intermediate, four months' course; Advanced, six months' course. In trade, salaries for such positions range from $5 to $15. The other two classes train specialists on the electric machines, special machines of various kinds, straw-sewing machines. Special machine work requires from three months to one year in addition to the full course of all-round operating. Salaries range from $6

to $30. An expert trade worker is in charge of each class.

Course of Work

Regular Operating Course:

1. Control of power—learning names and uses of parts of machines. Making bags, clothes, and operator's equipment.

2. Straight and bias stitching, equal distance apart.

3. Spaced bias stitching from given measurements.

4. Making and turning square corners, stitching heavy edge for tension practice.

5. Machine table apron, using former principles. This is used to protect operator from shafting and oil.

6. Seams: Plain seam, plain and band seam; French seam; bag seam on warp; bag seam, one warp and one bias; bag seam, two biases.

7. Hemming: Different sized hems turned by hand for correct measurements; hems run through hemmer to learn use of attachment and give speed; seams through hemmer—bag seam, flat fell.

8. Quilting: Following designs made by pupils in Art Department. Practice for control of power, starting and stopping machine at given point.

9. Banding: Straight and bias bands placed by measurement from design made in Art Department. Practice for edge stitching, turning corners, accuracy of measurement.

10. Advanced seams on cloth and silk: Flannel seam, slot seam, umbrella seam.

11. Yokes made and put on: Round yokes—petticoats; round front and straight back—drawers and petticoats; bias yokes—waists; shaped yokes—aprons; round yokes—children's dresses; miter corner yoke—dresses.

12. Tucking: Free hand tucking for accuracy in measuring and use of rule; special tucking on length and widths of different materials to give speed and skill in handling different fabrics.

General Construction: Trade Stock and Order Work (See Order Work): Infants' slips, children's underwear; children's rompers; children's dresses; women's underwear; shirtwaists; aprons; house dresses; fancy negligees.

Special Machine Work:

Buttonholes; tucking; two-needle work; hemstitching; Bonnaz (Corneli) embroidery; machine hand embroidery, scalloping. Students of special ability only are fitted to take this course. One girl in fifteen has usually the requisite application and self-control to operate a special machine successfully. Each machine is specialized, *i. e.*, does its own particular work and no other. Patient attention to little things is required on the part of the operator in order that good results may be produced. Such machines are supposed to need only a hand behind them to guide the work. Our experience has proved to us that good results are produced only when intelligence and patience are factors. In the factories, machinists keep the special machines in order, but the school aims to train the operator to keep her own machine in good condition, thus saving her valuable time.

Bonnaz (Corneli) embroidery work offers excellent opportunities for correlation with the Art Department. Both Bonnaz (Corneli) and machine hand embroidery must be felt in the muscles before they can be carried out on the material, therefore the work with the pencil in making designs which are to be carried out on the machine is of first importance. Free-hand designs must be made first in large, free movements on the machine

until the arm muscles are thoroughly familiar with the curve, sweep, and feeling to be executed. After mastery of movement and sweep are acquired, the same designs may be reduced in size ten or twenty times and the pupil will still work them out in perfect rhythm. After the mastery of movement is acquired, the cording, braiding, and three-thread attachment work are easily learned by a pupil who has the necessary mechanical sense. The course of Bonnaz (Corneli) work covers: chain stitch, lettering, appliqué work, cording, braiding, three-thread work.

Machine hand embroidery should be given as a supplementary course to Bonnaz (Corneli) embroidery. It gives excellent training in design and color work.

Special trade machine straw sewing should also be taken up after the regular course in operating. It gives splendid exercise for quick handling of material, but makes a poor foundation of itself on which to build a painstaking, expert, all-round operator. Speed is the first requisite in getting a hat properly shaped, as the straw braid is flying through the machine at the rate of four thousand stitches a minute; hence the general operating is given first to the pupil to train her in the requisite neatness. As straw-sewing has long slack seasons, the operator can during such times return to the regular operating.

Dressmaking Department

Aim

The aim of the Dressmaking Department is to train girls in the elements of the dressmaking trade, in order

to enable them to immediately secure employment as improvers and finishers or as assistants on skirts, waists, and sleeves, and to give them a preparation which will help them eventually to rise to positions of skill and responsibility. The training eliminates the errand girl and apprenticeship stages, and makes possible a living wage at the start. The result is accomplished in from nine to seventeen months, the time depending entirely upon the capability of the girl, her physical condition, her application to her work, her regularity of attendance, and her previous training.

Classes

The department is divided into three sections: (1) The Elementary, which consists of two classes for the teaching of simple sewing and machine work. This section is rendered necessary by the poor preparation of the students at the entrance. It would be not only practical but desirable for elementary public and industrial schools sc to train their students that they could omit this part of the Manhattan Trade School course. (2) The Vocational. This section also includes two classes. The work is tradelike in character, but much time has to be given to developing right habits of work as well as to learning specific kinds of handwork. The public secondary schools could offer this section to advantage, and through it train pupils for a better knowledge of the home or for future livelihood. (3) The Trade Section. This is a business shop, which reproduces trade conditions as nearly as possible and is subdivided into the same progressive divisions.

Although the object is to work as trade does, the educational aim is also prominent, and the course of training has been planned with both ends in view. Order work plays an important part in this section, for it makes possible the quantity and variety of material necessary to supply the many repetitions of important phases of dressmaking, the new views of old principles, and the elaborate costume manufacturing which are needed in the training. It would be impossible for a school to adequately deal with the many varieties of garments in this trade without some equivalent for the order work. The use of models or of practice material is not satisfactory on account of the great difference between theoretical and practical knowledge in handling valuable materials. A girl may learn to run fine tucks on cheesecloth, but this will not enable her to do satisfactory hand-tucking on chiffon. Neither is it a correct educational or economic principle to cut up quantities of good material, which the students will look upon as "rags," and then, after working on them, to throw them into a receptacle for waste or sell them simply to get rid of them. To secure the best results in any line of instruction there must be interest and enthusiasm. The aim, therefore, must be definite and the results vital. The work is planned to foster these higher qualities. The students produce articles for a definite use; they are given a required time in which the work should be completed; trade itself sets the standard of judgment, and a definite relation exists between the work of all the classes, so that old principles may be recognized when presented in new forms.

Courses of Work

I. Elementary Section. (1) Beginners' Class. First, a test is given each girl when she enters which enables her instructor to judge of her ability in sewing. It has been found necessary, in the majority of cases, to teach all or the greater part of the following principles: the use of sewing utensils, the making of the stitches, their application in articles, and the running of the sewing machine. Hence the second step has been a course of work covering the use of these needed principles, each girl beginning at the point where she needs training. Third, the final test. On the satisfactory completion of this very elementary training a test is given to show a girl's ability to work, to think, and to utilize ideas. If she is not yet fully prepared, further time is spent in emphasizing the points she still requires.

The work in the Beginners' Class is done upon articles which have a trade value and which are sold to customers or to the students for about the cost of the materials. The school furnishes the materials for all elementary work, but the students must provide their own tools and keep them in good condition. These include a thimble, needles, scissors, a tape measure, an emery, and a white apron.

Class instruction followed by individual criticism is the method of teaching in the Elementary Section. Emphasis is placed upon the proper use of the utensils, the position of the body, and the handling of the work. Individual records are kept of the grade of work and of the time taken to finish a problem. The course takes

from two to three months to complete, and the students are at work four and one-half hours per day.

Outline of Work in Beginners' Class

1. Stitches and special forms of sewing: Basting, running, overhanding, overcasting, hemming, blind stitching, sewing on buttons (two hole, four hole), buttonholes, featherstitching.

2. Seams: Plain; selvage and raw edges; French; felled; straight and bias edges; overhanded.

3. Machine stitching: Straight seams and rows; hems; facings—points; use of tucker.

4. Principles: Measuring, seams, hems, tucks, cutting by a thread; matching stripes; turning and basting hems; making casing for drawstrings; putting on band—by hand, by machine—one and two pieces; setting strings into bands; finishing ends of hems; putting on pockets—straight and shaped; plain placket; cutting bias strips; piecing bias strips; facing curved and straight edges (armholes, neck, waist, points); joining waist and skirt with bias facing; making straight tucked ruffle; inserting ruffle under tuck on skirt; ripping.

5. Articles used in the work (this list is changed at will and is merely representative): Handwork—Pin cushion, bag, towel, white apron with ruffle. Machine work—Belt, gingham apron oversleeves, child's dress with waist, uniform apron.

6. Supplementary work: Shoe bags, silver cases, holders, bibs, silk bags, darning bags, needle books, traveling cases, baby caps and work of a similar character.

7. Materials used: Cotton, linen, silk.

(2) Intermediate Class. The Beginners' Class gives most of its time to hand sewing, the Intermediate Class

emphasizes machine sewing. The work is a repetition of the principles taught in the Beginners' Class, but is presented in a different manner, with new applications. Orders are taken from individuals or business houses for the garments which are made in this course. The price is that of the trade. These orders furnish a market for the entire output of the class. A certain amount of class instruction is given, but the girls are expected to do independent work under supervision.

Outline of Work in Intermediate Class

1. Review of former principles on new garments: (1) French seam—straight edges, baby slips and nightgowns. (2) Hems, (*a*) straight, (*b*) turned by hand, on princess aprons, bloomers, sleeves, etc., (*c*) turned by machine—hemmer on ruffles, for drawers and petticoats. (3) Overcasting—seams of skirts. (4) Buttonholes—all garments. (5) Plackets—plain hemmed, on skirts, baby slips. (6) Bias bands—joining and applying to straight and curved edges, on princess aprons, drawers, top of petticoat. (7) Ruffle—joining, measuring, and applying under tuck, on skirt and drawers. (8) Machine instruction—threading, setting needles, winding bobbin, scale of thread, needle, and stitch.

2. New principles: (1) Flat fell—shaped and bias edges on princess aprons and drawers. (2) French seam—shaped edges in petticoat seams. (3) Loops—on petticoats and dressing sacques. (4) Hems—shaped edges in gored skirts, princess aprons and nightgowns, baby slips and children's dresses. (5) Overhanding—pieces on nightgowns, piecing ruffles and lace on underwear. (6) Plackets—faced in drawers, petticoats, bloomers, and dress skirts. (7) Bias band—applying to top of ruffle in petticoats and drawers. (8) Bias binding—

corset cover and nightgown. (9) Ruffle—finishing with bias bands on petticoat and drawers. (10) Cuffs—making and applying to nightgowns, baby slips, rompers, and house dresses. (11) Sleeves—gathering on wrong side and putting into baby slips, nightgowns, dressing sacques, etc. (12) Pressing. (13) Sewing hooks and eyes on petticoats. (14) Machine instruction in cleaning, oiling, and attachments.

3. List of articles made for stock and order: Aprons—princess, maids', fancy. Women's clothes—dressing sacques, nightgowns, kimonos, lounging robes, house dresses, chemises, drawers, skirts (washable, mohair, silk), collars, and corset covers. Children's clothes—nightdresses, night drawers, drawers, skirts, rompers, dresses, and aprons.

4. Materials used: Cotton, silk, woolen, and worsted.

II. Vocational Section. The increasing demand for ready-made clothing has opened a new field for girls obliged to enter the business world as soon as the law will permit them to leave school. This requires hand finishing on fancy waists and plain and fancy gowns, which are made by the dozens on machines run by electric power. It is not necessary to have a knowledge of actual dressmaking to be able to do this work. The ability to do good handwork rapidly is the prerequisite. In some establishments there are opportunities for girls of ability to rise from finisher to draper, which latter position commands a high wage.

The producing of fine, handmade underwear, waists, and dresses is another opportunity for girls who can take but a short time in which to prepare to earn their living. Work of this character is of a much higher grade

than that of the wholesale finishing, and demands the ability to do extremely good hand and machine work. The worker must be able to handle the finest kind of materials and to do the most intricate work, such as hand tucking, setting in lace, and trimmings.

Although the course in the Vocational Section trains for specific branches, it is very necessary that all dressmaking students should have experience in these lines in order to be better prepared for the actual dressmaking. If, however, a girl has the ability to do the work of these classes, she is allowed to skip either one or both of them.

Course of work in the Shop for Gymnasium and Swimming Suits: The students are drilled for one or two months in putting garments together, stitching, and finishing. As but two kinds of garments are made, speed is acquired and a certain amount of accuracy is gained through much repetition. Definite arrangements have been made through wholesale houses for the disposition of the product. The materials are furnished by the school. The price is that of trade.

(1) Articles: Swimming suits (patented), bathing suits, and gymnasium suits. (2) Materials used: Cotton, wool, worsted.

Course of work in White Work Class: The previous training having been a general one for accuracy, speed, and the mastery over mind and hand, attention is now given for two and one-half or three months to fine detail work and the handling and keeping fresh and clean of the daintiest of cotton goods. The materials are furnished by the school and the work is sold to customers at trade prices.

(1) Principles: Hand-tucking, rolling and whipping, mitering corners, overhanding trimming, inserting lace and embroidery by hand and machine, fine featherstitching, and white hand embroidery. (2) Garments for stock and order; fine underwear, waists, and baby clothes. (3) Material used: cotton.

III. Trade Section—The Business Shop. Trade demands skilled workers, and preference is given to those who have had practical training. The trade section aims to add experience to skill by offering the students the actual work and conditions demanded in the outside market. The general scheme is the one in use in moderate-sized dressmaking establishments.

The workroom has its tables devoted to separate kinds of work, the students obtain a definite amount of knowledge from each experience, and pass from one to the other as rapidly as their ability to grasp the principles will permit. Each division is in charge of an instructor with practical trade experience, who prepares and supervises the work and also does the skilled parts which the students, on account of their lack of experience, are unable to do.

The girls are not taught cutting, fitting, and draping, as trade would not permit a sixteen-year-old girl to attempt this work on account of her lack of judgment and experience; but they have the opportunity to see and assist in the preparation of work. No girl in the trade shop will make a complete garment, but she will have worked upon all parts many times.

Custom orders supply the shop with work. The customers are interviewed, measurements are taken, esti-

mates are given, and dates for fittings are planned. The information obtained is recorded upon blanks prepared for the purpose. The materials are purchased, the garments cut, and the different parts (skirts, waists, sleeves) are delivered to the tables where such work is done. Blanks are provided for the recording of all materials used for customers' work, and from these the bills are made out in the main office. Stock is obtained from the storerooms on signed requisitions only. The stock clerk measures and delivers the materials and notes the amount withdrawn on each package.

Course in Dressmaking Shop:

1. Linings: Waist (practice materials): basting, stitching, pressing, binding, boning (whalebone, featherbone); hooks and eyes; facing; overcasting.

2. Shirtwaists and nurses' uniforms: Covering rings; making shirtwaist cuff; making shirtwaist placket; putting on neckbands.

3. Skirts: Petticoats or drop skirts for; basting, stitching, pressing; seams, bands, plackets; trimming, pinning, putting on band.

4. Trimmed skirts: Slip stitching; milliner's and flat folds; covering buttonholes; binding, shirring, cording, tucking, piping, facing, braiding.

5. Trimmed waists: Application of principles; experience in making and applying trimming and handling delicate or perishable materials.

6. Trimmed sleeves: Application in general knowledge and experience in applying trimmings.

7. Garments made in the shop: Shirtwaists, fancy dressing sacques and wrappers; nurses' and maids' uniforms; dancing dresses; elaborate waists; street, afternoon, and evening gowns; tailored suits.

8. Materials used: All varieties of cotton, linen, silk, woolen, and worsted dress fabrics; chiffon, mousselain, and trimmings of all kinds.

IV. Results of training. A change in the general appearance of the girls is soon apparent, for which ability to make their own clothes and the refining influence of the doing of good work on good materials is probably responsible. The elements of good order, obedience, thoughtfulness, judgment, self-control, industry, and thrift are fostered, and every effort is put forth to make intelligent workers.

The fact that on entering trade the girls from the Trade School receive nearly double the salary given untrained girls indicates that they are fitted for the outside workrooms.

V. Departmental relations. The emphasis which the Academic and Art Departments have laid upon accuracy, careful work, appreciation of measurements, distances, color, and form has been of great value to the students in the Dressmaking Department. The Operating Department has also been of service in training some of the students to work on special machines, thus enabling them to make dress decoration. The use of the electric power machine in custom dressmaking establishments is on the increase.

VI. Trade relation. The department is kept in close touch with trade conditions through personal visits, through the houses which purchase its output, and through those from whom the stock is bought. Many opportunities to purchase materials at reduced rates have been secured through the kindly interest of the trade.

An advisory board, composed of business men and women, has been appointed to pass judgment upon the scheme of work, the standard and quality of work, and the cost and market value of the products.

Millinery Department

Aim

The aim of the Millinery Department is to train assistants, improvers, frame makers, and preparers for wholesale and custom workrooms.

Short Course

When this department was first opened the scope of the work for the day classes was much more extended and included training for copyists, designers, and milliners. The curtailing of the course to more elementary preparation was brought about by a feeling of dissatisfaction with this trade for the young, untrained, or partly skilled workers. Close and continued contact with millinery shops showed that for young wage-earners a small, initial wage and a not very rapid rise are usual; that a short, irregular, seasonal engagement is almost inevitable; that a long experience is needed before even the trained girl can rise to the higher positions; that young workers become discouraged and are apt to drop the trade altogether, even for lower wages, if they can obtain steady work in another occupation. As it was the fourteen or fifteen-year-old girl who came for the instruction, it was better for her to be well trained as an assistant than to detain her at the school for a more advanced position which she would probably not be

allowed to take on account of her youth and inexperience. Students in this department need to be watched with especial care to determine whether they are well adapted for their occupation, and the mediocre worker would better enter some other field where the opportunities for her are more encouraging. As the advance is slow the girl also whose poverty is hurrying her into wage-earning would better not elect this work.

The night classes which have been offered at the school gave training in the more advanced lines of millinery. The day classes are also prepared to do so whenever older workers feel they can give time for the instruction.

Course of Instruction

Length of course: Six months.

1. Practice: Shirring, tucking, cording, rolled hem, plain fold, milliner's fold, and cutting and joining bias pieces.
2. Making and covering buckles and buttons; wiring ribbons and laces; making hat linings and wiring hats.
3. Bandeaux: Wire, capenet, and buckram.
4. Wire frame construction from dimensions and models; making frames of buckram, capenet, and stiff willow.
5. Covering frames with crinoline, capenet, mull, maline, and soft willow.
6. Facings: Plain, shirred, and in folds.
7. Bindings: Stretch, puff, and rolled.
8. Plateaux: Plain and fancy.
9. Making hats of straw, silk, chiffon, maline, and velvet.

10. Sewing trimmings on hats and sewing linings in hats.

11. Renovating: Ribbon, velvet, lace, feathers, flowers.

12. Machine work: Plain stitching, tucking, shirring, bias strips stitched on material.

Orders are taken for a limited amount of trimmed hats in order to provide the students with experience in preparing, sewing on the trimming, and in finishing the hat.

As millinery is a seasonal trade, students are advised to take, in addition, lamp and candle shade making in the Novelty Department, or straw sewing in the Operating Department. They are thus provided with good trades during the months when their own trade is dull.

Novelty Department

Aim

(1) To teach the use of paste and glue in several good trades. (2) A short course in lampshade and candleshade making for girls who have a dull season in their regular trade during November, December, and January.

Lines of Work

Sample mounting, novelty work, jewelry and silverware case making, lampshade and candleshade making.

Trades and Wages

Sample mounting is pasting or gluing samples of all kinds of material on cards or in books to be used by salesmen in selling goods. New York is a center for this

class of work. It gives year-round employment to many girls, and offers wages from $5 to $15 a week. The simpler lines of sample mounting can be learned by almost any girl. A bright student can learn this trade in six months.

Novelty work is the covering and lining of cases and boxes with different materials. Girls can earn from $5 to $18 a week, and can learn the trade in from eight months to a year.

In jewelry and silverware case making the girls are taught both to cover and line up the cases; they earn from $5 to $15 a week. It takes from eight months to a year to learn this trade.

Lampshade and candleshade making: A short course is offered to good sewers who wish to learn a line of work that will give them employment during November, December, and January, which is the busy season in this occupation. Girls can earn from $1 to $2 a day. It is a very good course for millinery workers, as the work is similar and therefore easily learned, and the slack time in millinery is the busy time in this trade.

Course of Work

All pupils entering the Novelty Department take a short course in sample mounting to learn the use of paste and glue. Some are advanced soon to the novelty work, while others continue in sample mounting, taking up a greater variety of work along that line. Those entering for lamp and candle shade making do not take the sample mounting, but come from the millinery or sewing classes, where they have had some training with the needle.

Interrelation with Academic and Art Work

In the academic classes the girls are drilled in measurements and have problems estimating the cost of materials and labor. Their discussions pertain to actual processes and materials used in the classes of the Novelty Department.

In the art classes the girls are trained to draw straight lines and square corners, to miter corners, to fold on a line, to make good letters and figures, and to appreciate good proportions and balance. This work enables the student to arrange her samples in straight lines on the card, with proper margins, and to print neatly on the card the name of the materials and stock numbers. The discussion of materials helps her to cut and place her materials on the cases so that the design will appear to the best advantage. The color work aids her in choosing the best hues of ribbons or linings to use with the figured coverings.

Orders

Where trade orders can be used without keeping the girls too long on the one problem, they prove a great incentive and also help them to acquire speed. Private orders give more variety in the work, and thus enable the girls to adjust themselves more easily to each season's new styles. The private orders, however, being smaller in number, do not help the students to acquire the speed that the repetition does in the large trade orders. Each kind of order work is used, as it can be of advantage to the development of the student.

Art Department

The courses of work in the Art Department are shaped according to the needs of each trade department. Various phases of work in dressmaking, electric power operating, novelty, and millinery are made "centers of interest." Each girl thus finds her art aiding her to be more valuable in her trade. Her enthusiasm is awakened and she is stimulated to self-expression directly along the line of her chosen work. The entering students lack in the technical skill which can be used in their trades. The first step, therefore, is to give the elementary exercises needed in their departments. This is followed by more difficult and more artistic work as the student shows ability.

Aims

To help the work of the trade departments, to improve the trade selected by each student, to give ideals.

Conditions

Time of average student in art, seven months, three hours per week. Previous art training little or none.

Difficulties

The students do not see or estimate correctly; they are not exact, and they lack ideals.

Organization of Art Work

I. *General* course for *all* students, connecting Art Department with Trade Courses. Approximate time, three months, three times a week.

1. Principles of Proportion: Measurements by ruler and free-hand. Related lines and sizes, as in hems and margins.

2. General Use of Principles: (1) Horizontal, vertical, oblique lines for machine practice. (2) Related margins and spots as used in the writing of letters, the orderly placing of subject on a page.

3. Specific Department Work: Departments express their needs to Art Department. (1) Machine operating: (*a*) Lines—horizontal, vertical, oblique, for machine practice. (*b*) Quilting, banding, practice for curves and square corners.

(2) Sewing: (*a*) Lines—horizontal, vertical, oblique, for machine and hand practice and tailor basting. (*b*) Hems, tucks as prescribed by department and proportioned to garment. (*c*) Constructive drawing—giving different angles and figures with a view toward an intelligent use of patterns for waists and skirts. (*d*) Piecing bias and mitering corners.

(3) Novelty: (*a*) Lines—horizontal, vertical, oblique, for sample mounting. (*b*) Spacings for sample mounting. (*c*) Letterings and figures for sample mounting. (*d*) Margins for pasting different shaped labels and samples. (*e*) Paper folding, mitering corners.

(4) Millinery: (*a*) Lines—horizontal, vertical, oblique, for hand sewing practice. (*b*) Problems for proportions for the wire frames. (*c*) Bias facings and mitered and square corners. (*d*) Color.

Students unable to benefit further by the Art Work are dropped from course and devote this time to their trade.

II. *Supplementary* course for students showing ability who have finished the prescribed departmental course. Approximate time, seven to nine months.

1. Machine Operating: (1) First step in designs, arrangement of straight lines in borders, and orderly arrangement of spots in borders. (2) Squared-off designs, stenciling same, for coördination. (3) Sample curved line designs, continuous (limitation of machine and for speed). (4) Patterns for practice work for the special machine. (5) Special workers to practice the exercises for the Bonnaz machine. (6) Color—three charts. (7) Exercises for perforating.

2. Sewing: (1) Simple designs for shirtwaists and for braiding. (2) Designs for revers, cuffs, vests, and yokes. (3) Proportions of figure. (4) Copying from magazines for trade technicalities. (5) Discussions on dress for trade workers. (6) Color harmony in dresses and application.

3. Millinery: (1) Sketching different views of the hats. (2) Sketching models. (3) Color harmonies and application. (4) Discussions on how art principles can be applied to hats of the present day.

4. Novelty: (1) Simple, squared-off designs stenciled for coördination for hand and head, not gained in the trade work. (2) Simple illumination of words and phrases. (3) The materials and decoration to be used for pads, desk sets, and boxes discussed and carried out.

In this supplementary course emphasis is put on the thought, invention, and appreciation of the student.

III. *Special* course for students who show unusual ability in art and can utilize it in trade.

1. Costume sketching for making records in dressmaking workrooms.

2. Stamping and perforating: (*a*) Machine practice —pedaling, guiding needle, threading machine, and learning to adjust the different parts. (*b*) Stamping on different materials with the different mediums; composition of the different mediums, liquid and dry. (*c*) Copying

patterns for perforating; nature study for motifs; conventionalizing those to apply them to materials.

(All designs are such as can be used in trade and are made according to trade methods.)

Academic Department

Aim

I. Elementary: To supplement previous schooling. Girls who have left the public school from low grades need special tutoring in the common branches. Special instruction is also needed for newly arrived foreigners.

II. Trade: To quicken and enrich the mind, that the girl may become a more efficient, intelligent, and enthusiastic trade worker.

The work falls under the following subjects: Civics, Industries, Arithmetic, English.

Civics

This course is given as a means of enabling the pupil to recognize her place in the family, the school, the community, and in the world's work. For lack of a better term it is called Civics. It is dealt with under two heads: (1) Community Life in General, (2) Community Life in New York City.

1. Under the first head the discussion of life in a given community is followed by the simple facts that lie at the foundation of civic life. These are approached through the interests or desires which the pupil feels in common with all other people. Building still further on the pupil's own experience, she is led to apply the

ideas received to her own community, which ever widening its scope is carried from the neighborhood or the school to the city, the state, and on to the nation.

Civics also gives to the pupils a knowledge of the existing laws under which they will work, by whom these laws are made, and the possible means for improving them. In the discussion of such subjects as Tenement House Laws, Child Labor Laws, and Trade-Unions, there is opportunity for the introduction of home and business economics which have been found to be valuable. Economics is further taught by the detailed discussion of the apportionment of an income of $6 a week for fifty working weeks, considering car fare, lunches, savings, a portion toward family support, and an allowance for clothes. The literature for this course is obtained from the United States Department of Commerce and Labor, the State Department of Factory Legislation, the Consumers' League, the National and State Labor Committees, and current magazines. Mr. Arthur M. Dunn's, "The Community and the Citizen," especially such chapters as those on the "Making of Americans," "How the Government Aids the Citizen in His Business Life," "Waste and Saving," "What the Community Does for Those Who Cannot or Will Not Contribute to Its Progress," has given valuable assistance in leading to discussions which have direct bearing upon daily life and work.

2. The following outline shows the treatment of the second division of Civics:

New York City: (1) City Government, (*a*) Officials, Mayor, Commissioner, Borough President, Aldermen;

(*b*) City Departments. (2) Citizenship, (*a*) Who are citizens, (*b*) How to become a citizen, (*c*) Duties and privileges of citizens, (*d*) Aliens. (3) Child Labor Laws, (*a*) School attendance, (*b*) Working papers, how obtained, (*c*) Hours for work. (4) Factory Laws for girls over sixteen years old. (5) Sweatshop labor. (6) Tenement House Laws. (7) Trade-Unions. (8) Commerce and Industries of New York. (9) Philanthropies.

Industries

Aim: To furnish the worker with a background for her trade and to help her to see her place in the working world of today. 1. A generalized view is taken of the main steps in the early progress of the race. 2. Textile materials are discussed as to their values, their uses, their cost, the processes of their manufacture, the comparison of foreign and domestic goods, with reasons for the differences, and the connected problems of arithmetic which the students will meet. These subjects help the girl to "get next" to what she is working with every day and to arouse interest in her personal connection with the subject. The English girl whose father was once employed in a lace house in London brings mounted specimens of that sort of handwork to the class; the Hungarian brings hand-spun articles from her mother's bridal outfit; the Italian presents a skein of raw silk taken from the family's treasure box, and the girl from Roumania brings an embroidered bed cover. The student whose mother does not believe cotton ever grew on bushes asks that she may verify her own statement by taking home a real cotton ball. A Labor Museum is being collected to give reality to the instruction, and

exhibits from it, which show the steps in the manufacturing of the fabrics and of other familiar articles, are put up in the classroom when needed. A bulletin board provides for the numerous clippings brought by the students or teachers.

Arithmetic

Aim: The fundamental aim of arithmetic is to give the pupils working methods for the problems that occur in trade practice. To make the correlation clear to the girls, workroom methods of presentation and phraseology and the customary materials are used. Sewing and operating students make hems, tucks, and ruffles to actual measurements; novelty girls cut and arrange cards for samples in accordance with their workroom demands; and millinery students work out the measurements for hat frames as closely as varying styles permit.

With the fundamentals of trade problems established, arithmetic is further developed along special lines of trade to meet the demands of the business world. The trained worker should not only be skilled in the manipulation of tools and materials, but she should be able to compute her own problems, such as estimates for garments, how to cut materials economically, the cost of one garment or article as related to the cost of many of the same kind, the prices, and similar trade questions. The ability to deal with these subjects adds materially to the value of a skilled worker.

The central scheme of the course is to lead the pupil to prompt and accurate mental calculation. This is stimulated by frequent oral drills in trade problems and

business problems involving short methods of computation. The extent and progress of this work are regulated by the ability of the class.

The following outlines show the adaptation of arithmetic to the different trades:

Operating: (1) Cutting of gauges, (*a*) For hems, (*b*) For tucks. (2) Tucking problems, (*a*) With gauges, (*b*) As formal arithmetic problems. (3) Ruffling problems. (4) Time problems, Department time schedules as basis for the work. (5) Factory problems. (6) Income, expenditure, savings. (7) Bills and receipts. (8) Computation of quantity of material required for garments, (*a*) By measuring garments, (*b*) By use of patterns on cloth, (*c*) Economy of material. (9) Problems based on above work. (10) Civic problems.

Sewing: (1) Cutting of gauges, (*a*) For hems, (*b*) For tucks. (2) Tucking problems. (3) Ruffling problems. (4) Computation of quantity of material required for garments, (*a*) By measuring garments, (*b*) By use of patterns on cloth, (*c*) Economy of material. (5) Problems based on above work. (6) Store problems. (7) Bills and receipts. (8) Income, expenditures, savings. (9) Textile problems. (10) Civic problems.

Novelty: (1) Sample mounting, (*a*) Cards are cut a given size and are divided with the ruler into spaces for samples, with proper margins, etc., according to trade demands, (*b*) Problems involving the various sizes and shapes of cards and samples, using cards and rulers for the work. (2) Sample cutting. (3) Cutting materials for boxes, (*a*) Pulp board, (*b*) Covering plain, flowered, (*c*) Economy of materials. (4) Problems based on above work. (5) Trade problems, (*a*) In sample mounting, accuracy, speed, (*b*) Cost of materials. (6) Bills and receipts. (7) Income, expenditure, savings. (8) Civic problems.

Millinery: (1) Measurement of frames. (2) Trade problems, (*a*) Quantity of material, (*b*) Price of materials, (*c*) Economy of material. (3) Orders, (*a*) By letter, (*b*) By order blanks. (4) Bills and receipts. (5) Income, expenditure, savings. (6) Problems on manufacture of silk. (7) Civic problems.

English

Aim: 1. To facilitate oral and written expression. 2. To give practice in business forms: *Spelling:* (1) Technical terms of each trade department; (2) Textiles and other trade materials; (3) Ordinary business terms. *Descriptions:* (1) Written work on materials used and articles made in each department; (2) Outlining and defining of department work. *Business Forms:* (1) Letters of application; (2) Letters ordering goods; (3) Telegrams, postal cards, etc.; (4) Writing of advertisements.

In addition to practice in spelling and in the writing of business forms, the work in English aims to be in close correlation with the other subjects taught. As a rule, the latter part of each recitation period is spent by the pupils in writing upon the subject in hand. The purpose is to obtain from them freedom of expression after arousing interest in a subject, rather than to get long compositions necessitating home study and probably generating a dislike for written work. Attention is called to paragraphing and emphasis is laid upon both the form and the manner of writing, but form is made subservient to thought. The interrelation of Art Department helps the student to appreciate the need of good form in the appearance of a written page.

Physical Education Department

The young wage-earner who goes into trade untrained at fourteen years of age is greatly handicapped by her physical condition. Either through ignorance or neglect early symptoms of disease are disregarded, and it is not until she finds herself out of employment as a result of physical weakness that she realizes that good health is the capital of the working girl.

Many of the girls who enter the school are found to be suffering from poor vision; enlarged glands caused by decayed teeth; poor nasal breathing as a result of adenoid growths or enlarged tonsils; anæmia; skin eruptions; slight asymmetries and poor posture. These defects produce exaggerated nerve signs and poor nutrition.

Aim

The work of the Physical Department is to correct as many of these irregularities as possible and also to train the student to a knowledge of her body and how to care for it, that she may be able to stand the long hours of confining work and be able to show efficient results in her trade.

The following examination is required of each entering student:

Physical Examination: Beginning with the family history, a complete record of all important events relating to a student's physical life is taken. She is carefully examined for asymmetry; curvature, incipient or well defined; traces of tuberculosis; weakness of heart and lungs; enlarged glands; skin diseases, or signs of nervous disorders. She is closely questioned as to all bodily functions and a careful record is kept of irregularities. Eyes, ears, teeth, nose, and throat are likewise examined. Impressions of the feet are made in order to detect weakness of the arch or flatfoot. Measurements of height, weight, and the principal expansions are taken for comparison with later records and for the purpose of comparing with normal standard.

Prescribed Treatment

After the examination the girl is instructed as to treatment, if any is needed. If perfectly normal she will report for gymnastics three times a week. If any asymmetry, curvature of the spine, heart disease, or nervous disorders are discovered, she must report for special corrective exercises at the school. In some cases individual instruction is given for supplementing the work at home. Cases demanding special apparatus and individual attention have been treated in the Physical Education Department of Teachers College, through the kindness of the director, Dr. Thomas Denison Wood. The girls so affected have thus the advantage of the latest methods known to science. If any of the numerous skin diseases are present which demand frequent and regular attention, the student is assigned to a group who go twice a week to a dispensary to receive electrical or X-ray treatment. In cases of enlarged tonsils or adenoids, the necessity for immediate operation is explained and every effort made to gain the consent of the parents. When permission is obtained the girl goes to a neighboring hospital on Sunday evening, is oper-

ated upon on Monday, and returns home Tuesday. Each student must have her eyes thoroughly examined by a doctor selected at the Ophthalmic Dispensary. If glasses are needed they are procured at the expense of the parent or donated by an optician who is interested in the school. Dispensary treatment is also necessary in cases of catarrh of nose and throat. Teeth are carefully examined and the girls directed to their own dentists, or to the Dental Dispensary adjoining the school, where we are fortunate enough to have a limited amount of work done free of charge. Cases of asymmetry demanding braces, plaster jackets, and operations have been treated at the Post-Graduate Hospital. Tuberculosis cases in advanced stages have been placed on the special boats in New York Harbor or are sent to Tubercular Camps in the country.

In sending girls to the hospitals and dispensaries the aim is to place them in touch with institutions to which they will have independent access after they leave the Manhattan Trade School.

Statistics

The statistics below show the condition of 278 girls when they registered at the school. The charts are divided according to the departments entered. From them can be seen the need of special care for the health of the working girl.

A second examination of the same girls six months later shows gain in weight, height, and general health; 125 had their teeth put in order; six were treated for defective hearing; twenty had attended the Skin Clinic;

		Dressmaking.	Art.	Millinery.	Novelty.	Operating.	Total.
Nutrition	Good	101	7	15	26	35	184
	Fair	39		2	6	18	65
	Poor	7		4	10	8	29
Mentality	Good	122	7	19	33	40	221
	Fair	21		2	6	17	46
	Poor	4			3	4	11
Nerve signs	Present	39	3	6	13	16	77
	Absent	108	4	15	29	45	201
Asymmetry slight curvatures, high hips or shoulders, etc.	Present	53	4	12	23	29	121
	Absent	94	3	9	19	32	157
Posture	Good	93	4	8	29	31	165
	Fair	54	3	13	13	30	113
Skin	Good condition	95	5	13	32	44	189
	Acne, comedones, etc.	52	2	8	10	17	89
Glands	Good condition	66	3	10	19	20	118
	Enlarged	81	4	11	23	41	160
Vision	Need glasses	44	3	8	12	19	86
	Good condition	103	4	13	30	42	192
Hearing	Defective	6	1		4	1	12
	Good	141	6	21	38	60	266
Speech	Good	170	7	20	37	56	260
	Defective	7		1	5	5	8
Nasal breathing	Good	32	1	4	10	13	60
	Fair	58	4	11	13	28	114
	Poor	57	2	6	19	20	104
Tonsils	Good	44	1	6	7	21	79
	Slightly enlarged	75	2	11	25	24	137
	Much enlarged	28	4	4	10	16	62

		Dressmaking.	Art.	Millinery.	Novelty.	Operating.	Total.
Teeth	Good	103	5	16	30	40	194
	Poor	44	2	5	12	21	84
	Need attention	108	4	12	31	40	195
Hearts	Good	122	4	21	23	44	214
	Weak, irritable, or with anæmic murmurs	24	2		17	13	56
	Organic trouble	1	1		2	4	8
Lungs	Good	138	5	20	36	58	257
	Tuberculosis	3			2		5
	Suspected tuberculosis	6	2	1	4	3	16
Feet	Good	125	7	16	38	53	239
	Weak arches	10		1		4	15
	Broken arches or flatfoot	12		4	4	4	24
Enlarged thyroid glands		12	1	2	1	7	23
Exophthalmic goiter		2				2	4
Chorea		2			2	1	5
Needing corrective exercises		5		3	4	7	19

all had their eyes examined; eighty-six were fitted with glasses. In twenty-five cases where the adenoids and tonsils were removed the result was increase in weight, better breathing and heart action, alertness of mind, and a noticeable improvement in trade work. Where the obstructions of nose and throat still remain there is loss

in weight and diminished chest expansion and a generally weakened condition. The extraction of decayed teeth and the providing of well-fitting glasses have diminished nervous irritability and the frequency of headaches. Three cases of tuberculosis were sent to camps. Seven cases of organic heart trouble were treated by specialists; nineteen girls were given corrective exercises at Teachers College; two were fitted with shoes and braces; two were put into plaster jackets, one for lateral rotary curvature and one for neuritis; and one advanced case of chorea has been placed in the hospital. Of the girls whose records are given in the list it can be said that, with the exception of the cripples and a few others needing simple operations, a year's care shows that very few of them are in any way handicapped by the effects of disease.

Physical Education Course

I. Gymnastics:

1. Elementary: 3 thirty-minute periods a week. (1) Swedish floor work for general posture; (2) Work in control of breathing; (3) Marching tactics for form and accuracy; (4) Light apparatus work: (*a*) Wands, (*b*) Dumb-bells, (*c*) Indian clubs; (5) Heavy apparatus for coördination; (6) Simple dances and rhythm work for grace and poise; (7) Simple plays and games.

2. Advanced: 2 forty-five-minute periods a week. (1) Gymnastic dances containing more than three figures; (2) Swedish and Danish weaving dances in correlation with study of textiles (Academic Department); (3) Folk dances of Sweden and Russia for form; (4) Modern athletic dances for grace and poise; (5) Athletic Competition: (*a*) Running and jumping, (*b*) Relay and obstacle races, (*c*) Hockey and basket ball.

3. Special corrective work for spinal trouble or poor position: (1) General floor work for mobility; (2) Free-hand work: (*a*) Single assistive and resistive exercises, (*b*) Hanging exercises with and without assistance, (*c*) Work with iron dumb-bells.

II. Hygiene: Talks on hygiene are a regular part of the work, and aim to give each girl a knowledge of her body and of its functions that will enable her to care for her health in an intelligent manner and to establish in her mind ideals of correct living which can be made practical in her surroundings.

1. *Personal Hygiene:* (1) Brief survey of the body as a whole; (2) The use of the mouth, nose, larynx, trachea, and lungs in breathing; (3) Care of nose and throat: (*a*) The nose as a source of infection, (*b*) Dangers of enlarged tonsils and adenoids, (*c*) Treatment of colds; (4) Structure and care of the teeth. (5) The Digestive System: (*a*) Organs directly concerned, and (*b*) Their care, (*c*) Disorders of the Digestive System; (6) The Nervous System, Brain, and Spinal Cord; (7) The Skin, (*a*) Structure and Use, (*b*) Hygiene of Skin; (8) Heart and Blood Vessels; (9) The Hair; (10) The Ears; (11) The Eyes; (12) The Feet; (13) The Hygiene of Clothes.

2. *Domestic Hygiene:* Construction and furnishing of Home: (*a*) Internal arrangement, walls, and coverings, (*b*) Ventilation, (*c*) Heating, (*d*) Lighting, (*e*) Water Supply, (*f*) Plumbing and Drainage, (*g*) Toilet rooms, (*h*) Disposal of Garbage and Ashes, (*i*) House Cleaning, sweeping, dusting, cleaning, and use of disinfectants.

3. *Foods:* (1) Nutritive value of foods; (2) Purity of food materials; (3) Cooking—Cooking utensils; (4) Planning of meals.

4. *Diseases:* (1) Causes and Transmission; (2) Contagious diseases, care, prevention; (3) Hygiene of sick room; (4) Insects and vermin; (5) Infectious diseases.

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